Volume Contents 1996

NUMBER 1

Contents

TETRAHEDRON SYMPOSIA-IN-PRINT NUMBER 58

FLUOROORGANIC CHEMISTRY: SYNTHETIC CHALLENGES AND BIOMEDICINAL REWARDS

Guest Editors: GIUSEPPE RESNATI* and VADIM A. SOLOSHONOK†

*C.N.R., Centro Studio Sostanze Organiche Naturali, Milano, Italy

†Institute of Bioorganic and Petrochemistry, Kiev, Ukraine

	iii	Contributors to this Issue
	vii	Announcement: Tetrahedron Symposia-in-Print
	xiii	Preface
	xv	Graphical Abstracts
Richard D. Chambers, Martin P. Greenhall and John Hutchinson	1	Direct fluorination of 1,3-dicarbonyl compounds
Chentao York, G. K. Surya Prakash and George A. Olah	9	Desulfurative fluorination using nitrosonium tetrafluoroborate and pyridinium poly(hydrogen fluoride)
Weiwen Ying, Darryl D. DesMarteau and Yoshihiko Gotoh	15	*N*-Fluoro-bis[(trifluoromethyl)sulfonyl]imide: electrophilic fluorination of imines and some methyl-substituted pyridines
Norihiko Yoneda and Tsuyoshi Fukuhara	23	Facile preparation of aromatic fluorides by deaminative fluorination of aminoarenes using hydrogen fluoride combined with bases
Simonetta A. Fontana, Charles R. Davis, Ya-Bo He and Donald J. Burton	37	The stereoselective preparation of *cis* and *trans*-1,2-difluoroethylene synthons
James R. McCarthy, Edward W. Huber, Tieu-Binh Le, F. Mark Laskovics and Donald P. Matthews	45	Stereospecific synthesis of 1-fluoro olefins via (fluorovinyl)stannanes and an unequivocal NMR method for the assignment of fluoro olefin geometry

Danièle Bonnet-Delpon, Jean-Pierre Bégué, Thierry Lequeux and Michèle Ourevitch	59	Trifluoromethylalkenes in cycloaddition reactions
Katsuhiko Iseki, Satoshi Oishi and Yoshiro Kobayashi	71	Reversal of stereoselectivity in the Evans aldol reaction of α,α-difluoro and α,α,α-trifluoro carbonyl compounds
Koichi Mikami, Tomoko Yajima, Tsuyoshi Takasaki, Satoru Matsukawa, Masahiro Terada, Tadafumi Uchimaru and Masamichi Maruta	85	Asymmetric catalysis of carbonyl-ene and aldol reactions with fluoral by chiral binaphthol-derived titanium complex
Manfred Schlosser and Dominique Michel	99	About the 'physiological size' of fluorine substituents: comparison of sensorially active compounds with fluorine and methyl substituted analogues
Leticia U. Colmenares and Robert S. H. Liu	109	Fluorinated phenylrhodopsin analogs. Binding selectivity, restricted rotation and ^{19}F NMR studies
Julia M. Dolence and C. Dale Poulter	119	Synthesis of analogs of farnesyl diphosphate
Alberto Arnone, Pierfrancesco Bravo, Alessandro Donadelli and Giuseppe Resnati	131	Fluorinated analogues of nojirimycin and mannojirimycin from a non-carbohydrate precursor
Uwe Wucherpfennig, Thomas A. Logothetis, Uwe Eilitz and Klaus Burger	143	2-*C*-Trifluoromethyl substituted 3-deoxypentoses
S. Caddick, L. Gazzard, W. B. Motherwell and J. A. Wilkinson	149	Preparation of 1-fluoroglycosides from 1-arylthio and 1-arylseleno-glycosides using 4-methyl(difluoroiodo)benzene
Hiroshi Fukuda, Makio Tetsu and Tomoya Kitazume	157	Synthesis of chiral difluorinated [6]-gingerol
Jens Nieschalk, Andrei S. Batsanov, David O'Hagan and Judith A. K. Howard	165	Synthesis of monofluoro- and difluoro-methylenephosphonate analogues of *sn*-glycerol-3-phosphate as substrates for glycerol-3-phosphate dehydrogenase and the X-ray structure of the fluoromethylenephosphonate moiety
S. Halazy, A. Ehrhard, A. Eggenspiller, V. Berges-Gross and C. Danzin	177	Fluorophosphonate derivatives of N^9-benzylguanine as potent, slow-binding multisubstrate analogue inhibitors of purine nucleoside phosphorylase
Franco Pasqui, Franca Canfarini, Alessandro Giolitti, Antonio Guidi, Vittorio Pestellini and Federico Arcamone	185	Synthesis of ring A fluorinated anthracyclines
Tsutomu Konno, Takashi Yamazaki and Tomoya Kitazume	199	Synthesis and application of α-trifluoromethylated aldehydes
Iwao Ojima, Scott D. Kuduk, John C. Slater, Rayomand H. Gimi and Chung Ming Sun	209	Syntheses of new fluorine-containing taxoids by means of β-lactam synthon method
Yoshio Takeuchi, Asuka Yamada, Takanori Suzuki and Toru Koizumi	225	Synthetic studies towards proline amide isosteres, potentially useful molecules for biological investigations
Takashi Sakai, Fengyang Yan, Setsuo Kashino and Kenji Uneyama	233	Asymmetric reduction of 2-(*N*-arylimino)-3,3,3-trifluoropropanoic acid esters leading to enantiomerically enriched 3,3,3-trifluoroalanine
Vadim A. Soloshonok, Alexey D. Kacharov and Tamio Hayashi	245	Gold(I)-catalyzed asymmetric aldol reactions of isocyanoacetic acid derivatives with fluoroaryl aldehydes
Takashi Ishihara, Kazuyoshi Ichihara and Hiroki Yamanaka	255	Stereoselective synthesis of 3-fluoro azetidinones via the condensation of 2-fluoropropanethioate lithium enolate with imines
Alessandro Padova, Stanley M. Roberts, Daniele Donati, Carla Marchioro and Alcide Perboni	263	Synthesis of a novel fluoro-tribactam utilising an *N*-fluorosulfonimide in the key step
Akira Shibuya, Masahito Kurishita, Chizuru Ago and Takeo Taguchi	271	A highly diastereoselective synthesis of *trans*-3,4-(difluoromethano)glutamic acid

Andrea R. Sting and Dieter Seebach	279	Synthesis of (2*R*,3*S*)- or (2*S*,3*R*)-2-amino-3-trifluoromethyl-3-hydroxyalkanoic acid derivatives (threonine and *allo*-threonine analogs) from enantiopure 4,4,4-trifluoro-3-hydroxybutanoic acid
John T. Welch and Jian Lin	291	Fluoroolefin containing dipeptide isosteres as inhibitors of dipeptidyl peptidase IV (CD26)
D. Schirlin, S. Baltzer, J. M. Altenburger, C. Tarnus and J. M. Remy	305	Difluoromethyleneketone retroamide: a versatile concept of inactivation of proteolytic enzymes
Keith Ramig, Ashok Krishnaswami and Leonid A. Rozov	319	Chiral interactions of the fluoroether anesthetics desflurane, isoflurane, enflurane, and analogues with modified cyclodextrins studied by capillary gas chromatography and nuclear magnetic resonance spectroscopy: a simple method for column-suitability screening
	I	Instructions to Contributors

NUMBER 2

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
		TETRAHEDRON REPORT NUMBER 387
Andrew H. Berks	331	Preparations of two pivotal intermediates for the synthesis of 1-β-methyl carbapenem antibiotics
		ARTICLES
Ashok D. Patil, Alan J. Freyer, Mark F. Bean, Brad K. Carte, John W. Westley, Randall K. Johnson and P. Lahouratate	377	The plakortones, novel bicyclic lactones from the sponge *Plakortis halichondrioides*: activators of cardiac SR-Ca^{2+}-pumping ATPase
Rosanne Bonjouklian, Tim A. Smitka, Ann H. Hunt, John L. Occolowitz, Thomas J. Perun, Jr, Lawrence Doolin, Stephanie Stevenson, Lisa Knauss, Ranmali Wijayaratne, Stanley Szewczyk and Gregory M. L. Patterson	395	A90720A, a serine protease inhibitor isolated from a terrestrial blue-green alga *Microchaete loktakensis*
Y. Fulmer Shealy, James M. Riordan, Jerry L. Frye and Sheila R. Campbell	405	Intramolecular Diels–Alder reactions of the retinoid side chain
Ralph-Heiko Mattern, Sarath Gunasekera and Oliver McConnell	425	Synthetic studies of microcolin B
Gerhard Schlingmann, Stefan Matile, Nina Berova, Koji Nakanishi and Guy T. Carter	435	Absolute stereochemistry of the diepoxins
Thomas Thyrann and David A. Lightner	447	Synthesis and properties of a lipid bilirubin analog
J. Hodge Markgraf, Manuel Finkelstein and John R. Cort	461	Canthine analogs via intramolecular Diels–Alder reactions
Juzo Nakayama, Haibiao Dong, Kanji Sawada, Akihiko Ishii and Shigekazu Kumakura	471	Synthesis and characterization of dimers, trimers and tetramers of 3,6-dimethylthieno[3,2-*b*]thiophene and 3,6-dimethylselenolo[3,2-*b*]selenophene
Hiroyuki Ishibashi, Chisato Kameoka, Kazuya Kodama and Masazumi Ikeda	489	Asymmetric radical cyclization leading to β-lactams: stereoselective synthesis of chiral key intermediates for carbapenem antibiotics PS-5 and thienamycin

Hiroshi Shinokubo, Katsukiyo Miura, Koichiro Oshima and Kiitiro Utimoto	503	*tert*-Butyldimethylsilyldihalomethyllithium as a dihalomethylene dianion synthon. 1,3-Rearrangement and 1,4-rearrangement of silyl group from carbon to oxide
Tetsuya Hamada, Tsutomu Fukuda, Hirotoshi Imanishi and Tsutomu Katsuki	515	Mechanism of one oxygen atom transfer from oxo (salen)manganese(V) complex to olefins
Kiyoshi Horita, Takayuki Inoue, Kazuhiro Tanaka and Osamu Yonemitsu	531	Stereoselective total synthesis of lysocellin, the representative polyether antibiotic of the lysocellin family—I. Synthesis of C1–C9 and C16–C23 subunits
Kiyoshi Horita, Kazuhiro Tanaka, Takayuki Inoue and Osamu Yonemitsu	551	Stereoselective total synthesis of lysocellin, the representative polyether antibiotic of the lysocellin family—II. Synthesis of C10–C23 subunit via construction of two rings (B and C) and its condensation with C1–C9 subunit to achieve the total synthesis of lysocellin
Yasuhiro Kawanami, Hitoko Moriya, Yuka Goto, Keiko Tsukao and Michihiro Hashimoto	565	Lipase-catalyzed kinetic resolution of *trans*-2,5-disubstituted pyrrolidine derivatives
Ju Young Lee and Byeang Hyean Kim	571	Total synthesis of nonactin
Chris Meier and Wolfgang H. G. Laux	589	Enantioselective synthesis of diisopropyl α-, β- and γ-hydroxyarylalkylphosphonates from ketophosphonates: a study on the effect of the phosphonyl group
Ulrich Lüning, Heiko Baumgartner and Carsten Wangnick	599	Concave reagents—XVII. Steric effects on the acidity of concave sulfinic acids and concave benzoic acids
Mourad Hamdani, Denise Scholler, James Bouquant and Alexandre Feigenbaum	605	Selective formation of aminoxyls or oxaziridines by oxidation of 2,2,4,4-tetrasubstituted oxazolidines
Mustapha Majdoub, André Loupy, Alain Petit and Sadok Roudesli	617	Coupling focused microwaves and solvent-free phase transfer catalysis: application to the synthesis of new furanic diethers
Janine Cossy, Jean-Luc Ranaivosata and Véronique Bellosta	629	Synthesis of (±)-isoavenaciolide and of (±)-ethisolide from (±)-7-oxabicyclo[2.2.1]hept-5-en-2-one
István Bitter, Alajos Grün, Gábor Tóth, Áron Szöllosy, Gyula Horváth, Béla Ágai and László Toke	639	Novel chromogenic pyridinium derivatives of calix[4]arenes—I
Philip J. Parsons, Clive S. Penkett, Michael C. Cramp, Robert I. West and E. Sarah Warren	647	The facile construction of indole alkaloid models: a tandem cascade approach for the synthesis of a model for pseudocopsinine
Himatkumar V. Patel, Kavita A. Vyas, Sudhanshu P. Pandey and Peter S. Fernandes	661	Facile synthesis of hydrazonyl halides by reaction of hydrazones with *N*-halosuccinimide–dimethyl sulfide complex
Ana M. Costero, Miguel Pitarch, Cecilia Andreu, Luis E. Ochando, José M. Amigó and Tony Debaerdemaeker	669	Bis-cyclic crown ethers derived from biphenyl. Influence of conformation in complexation of $Hg(SCN)_2$
Dimitris G. Papageorgiou, Ioannis N. Demetropoulos, Isaac E. Lagaris and Panos T. Papadimitriou	677	How many conformers of the 1,2,3-propanetriol triacetate are present in gas phase and in aqueous solution?
Carlos Cativiela, Maria D. Diaz-de-Villegas and José A. Gálvez	687	The synthesis of enantiomerically pure (2*R*)-α-methylisoserine
Peter J. Ainsworth, Donald Craig, John C. Reader, Alexandra M. Z. Slawin, Andrew J. P. White and David J. Williams	695	Intramolecular Diels–Alder reactions of trienes tethered with an ether linkage
	I	Instructions to Contributors

NUMBER 3

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
Ingo Tornus and Ernst Schaumann	725	Novel applications of *N*-sulfonyl-alkylamines in [2 + 4] cycloadditions
Masanori Sakamoto, Mayumi Nagano, Yoko Suzuki, Kumiko Satoh and Osamu Tamura	733	Inter- and intramolecular Diels–Alder reactions using a highly reactive 1-aza-1,3-butadiene, ethyl (*E*)-3-(1,3-benzothiazol-2-yl)-3-cyanopropenoate
Burkhard Klenke and Willy Friedrichsen	743	Nonclassical furoxans—a computational study
Jan Bergman and Claes Stålhandske	753	Cyclization of *N*-acylanthranilic acids with Vilsmeier reagents. Chemical and structural studies
Attila Sápi, Ferenc Bertha, József Fetter, Mária Kajtár-Peredy, György M. Keseru and Károly Lempert	771	On the anomalous behaviour of certain 1-(4-methoxyphenyl)azetidin-2-ones towards cerium(IV) ammonium nitrate (CAN). Structure–reactivity studies
Bärbel Schulze, Sabine Kirrbach, Katrin Illgen and Peter Fuhrmann	783	Synthesis of stable hydroperoxides of sultams by oxidation of isothiazolium salts
Steffen Ernst, Svea Jelonek, Joachim Sieler and Klaus Schulze	791	4-Methallyl substituted 1,2,4-triazoline-3-thiones as a source of N-bridgehead heterocycles
Michael J. Konkel and Robert Vince	799	Cyclohexenyl nucleosides: synthesis of *cis*-4-(9*H*-purin-9-yl)-2-cyclohexenylcarbinols
Geoffrey C. Bryant, Michael J. Cook, Timothy G. Ryan and Andrew J. Thorne	809	Synthesis and characterisation of some mesogenic mononuclear and multinuclear phthalocyanines
Alan P. Marchand, Dongxia Xing and Simon G. Bott	825	Synthesis of (*Z*)- and (*E*)-1,2-di(1-adamantyl)ethene and their respective reactions with dichlorocarbene
Alejandro Santillán, Jr and Harold Kohn	833	Novel ring transformations for 5,5a-dibromobicyclomycin and derivatives
Bing Yan and Gnanasambandam Kumaravel	843	Probing solid-phase reactions by monitoring the IR bands of compounds on a single 'flattened' resin bead
Lifu Ma and David Dolphin	849	Nucleophilic reaction of 1,8-diazabicyclo[5.4.0]undec-7-ene and 1,5-diazabicyclo[4.3.0]non-5-ene with methyl pheophorbide *a*. Unexpected products
Michael A. Brook and Courtney Henry	861	Competitive acylation of arylstyrylsilanes: controlling silanucleophile reactivity
Yutaka Aoyagi, Tomofumi Manabe, Akihiro Ohta, Teruo Kurihara, Gui-Lin Pang and Takeo Yuhara	869	First total synthesis of pyrrolam A
Shinji Fushiya, Mamoru Matsuda, Shohei Yamada and Shigeo Nozoe	877	New opine type amino acids from a poisonous mushroom, *Clitocybe acromelalga*
Mitsuhiro Gotoh, Bin Sun, Ken Hirayama and Michihiko Noguchi	887	Intramolecular 1,3-dipolar cycloaddition at the periphery of heterocyclic systems—II. A mechanistic proposal for the facile oxime–nitrone isomerization at the periphery of pyridine and pyrido[1,2-*a*]pyrimidine systems
Bin Sun, Kenji Adachi and Michihiko Noguchi	901	Intramolecular 1,3-dipolar cycloaddition at the periphery of heterocyclic systems—III. A facile hydrazone–azomethine imine isomerization at the periphery of pyridine and pyrido[1,2-*a*]pyrimidine systems
Masaaki Sakai, Syunn Saito, Gen Kanai, Akira Suzuki and Norio Miyaura	915	Olefination and hydroxymethylation of aldehydes using Knochel's (dialkoxyboryl)methylcopper reagents

Cornelia Schroeder, Ralf Lutterbach and Joachim Stöckigt	925	Preparative biosynthesis of natural glucosides and fluorogenic substrates for β-glucosidases followed by *in vivo* ^{13}C NMR with high density plant cell cultures
Edwin C. Constable and Diane R. Smith	935	Photoisomerisation of 9-anthrylsubstituted pyridyl enones
Uli Kazmaier and Sabine Maier	941	Synthesis of sterically high demanding α-alkylated amino acids via Claisen rearrangement of chelated enolates
Frank Linkert, Sabine Laschat, Sirpa Kotila and Thomas Fox	955	Evidence for a stepwise mechanism in formal hetero-Diels–Alder reactions of *N*-arylimines
Ernst Urban, Guido Knühl and Günter Helmchen	971	Enantiomerically pure 5-substituted 2-oxo-cyclopentanecarboxylates by conjugate addition of cuprates to asymmetric shielded 2-oxo-cyclopentenecarboxylates
Caroline Perez, Yves L. Janin and David S. Grierson	987	Isoxazoles as latent α-cyanoaldehydes: construction of the indolo[2,3-*a*]-quinolizine ring system
Georges Dewynter, Nourreddine Aouf, Zine Regainia and Jean-Louis Montero	993	Synthesis of pseudonucleosides containing chiral sulfahydantoins as aglycone—II
Kuiling Ding, Yang Wang, Lijun Zhang, Yangjie Wu and Teruo Matsuura	1005	A novel two-phase oxidative coupling of 2-naphthols suspended in aqueous Fe^{3+} solutions
Vasilii A. Artyomov, Lyudmila A. Rodinovskaya, Anatolii M. Shestopalov and Viktor P. Litvinov	1011	*N*-Cyanochloroacetamidine—a convenient reagent for the regioselective synthesis of fused diaminopyrimidines
Adrian P. Higson, Gerard K. Scott, David J. Earnshaw, Anthony D. Baxter, Roger A. Taylor and Richard Cosstick	1027	Synthesis and structure of S-nucleosidyl S-aryl disulfides and their reaction with phosphites
Rafael Chinchilla, Nuria Galindo and Carmen Nájera	1035	Dimethyl 2-(tosylmethyl)fumarate: an allyl sulfone as electrophilic reagent for the synthesis of itaconate ester derivatives
Karl J. Hale, Jiaqiang Cai, Vern Delisser, Soraya Manaviazar, S. Andrew Peak, Gurpreet S. Bhatia, Timothy C. Collins and Neha Jogiya	1047	Enantioselective synthesis of (3*R*)- and (3*S*)-piperazic acids. The comparative unimportance of DMPU mediated retro-hydrazination
Roberta Galeazzi, Giovanna Mobbili and Mario Orena	1069	A convenient approach to diastereomerically pure 1,3,4-trisubstituted pyrrolidin-2-ones by intramolecular cyclisation of *N*-(2-alken-1-yl)amides mediated by Mn(III). An entry to both (*R*)- and (*S*)-3-pyrrolidineacetic acid
Andrew Pelter, Steven Peverall and Andrew Pitchford	1085	Hindered organoboron groups in organic chemistry—XXX. The production of *erythro*-1,2-diols by the condensation of dimesitylboron stabilised carbanions with aromatic aldehydes
	I	Instructions to Contributors

NUMBER 4

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
		TETRAHEDRON REPORT NUMBER 388
Geert-Jan Boons	1095	Strategies in oligosaccharide synthesis
		ARTICLES
Panos Iakovides and Kevin M. Smith	1123	Syntheses of oxygen analogues of sulfhemes-A and -C
Robert M. Williams, Glenn J. Fegley, Reneé Gallegos, Felicity Schaefer and David L. Pruess	1149	Asymmetric syntheses of (2*S*,3*S*,6*S*)-, (2*S*,3*S*,6*R*)- and (2*R*,3*R*,6*S*)-2,3-methano-2,6-diaminopimelic acids. Studies directed to the design of novel substrate-based inhibitors of L,L-diaminopimelate epimerase

Hiroshi Morita, Takashi Kayashita, Akira Shishido, Koichi Takeya, Hideji Itokawa and Motoo Shiro	1165	Dichotomins A–E, new cyclic peptides from *Stellaria dichotoma* L. var. *lanceolata* Bge.
Noriyuki Nakajima, Miyoko Matsumoto, Masayuki Kirihara, Masaru Hashimoto, Tadashi Katoh and Shiro Terashima	1177	Novel synthesis of (+)-hydantocidin based on the plausible biosynthetic pathway
Masayuki Takeuchi, Toshihisa Mizuno, Hideyuki Shinmori, Michio Nakashima and Seiji Shinkai	1195	Fluorescence and CD spectroscopic sugar sensing by a cyanine-appended diboronic acid probe
Elji Wada, Wen Pei, Hiroshi Yasuoka, Uchou Chin and Shuji Kanemasa	1205	Exclusively *endo*-selective Lewis acid-catalyzed hetero-Diels–Alder reactions of (*E*)-1-phenylsulfonyl-3-alken-2-ones with vinyl ethers
Gerhard Riehs and Ernst Urban	1221	Asymmetric protected 2-oxo-5-isopropyl-cyclohexenecarboxylates as key intermediates towards an EPC synthesis of (+)-heptelidic acid
Waldemar Adam, Michael Prein and Markus J. Richter	1231	Stereochemically defined cyclohexanediols through the regioselective ring-opening of silylated epoxy alcohols
Andreas Fredenhagen and Heinrich H. Peter	1235	New stereoselective Beckmann-type rearrangement leading to ring contraction
Michael D. Mizhiritskii, Leonid E. Konstantinovskii and Rosita Vishkautsan	1239	2D NMR study of solution conformations and complete ^{1}H and ^{13}C chemical shifts assignments of vitamin D metabolites and analogs
Deevi Basavaiah and Rachakonda Suguna Hyma	1253	Synthetic applications of the Baylis–Hillman reaction: simple synthesis of [2*E*]-2-butyloct-2-enal and [2*E*]-2-tridecylheptadec-2-enal
José I. Lozano and Fructuoso Barba	1259	Electrosynthesis of 2-benzhydrylidene-4,4-diphenyl-[1,3]oxathiolan-5-one: the reaction pathway
Ramón Alibés, José L. Bourdelande, Josep Font, Anna Gregori and Teodoro Parella	1267	[2 + 2] Photocycloaddition of homochiral 2(5*H*)-furanones to alkenes. First step for an efficient and diastereoselective synthesis of (+)- and (–)-grandisol
Ramón Alibés, José L. Bourdelande, Josep Font and Teodoro Parella	1279	Highly efficient and diastereoselective approaches to (+)- and (–)-grandisol
Mukund G. Kulkarni and Shankar R. Thopate	1293	Chemoselective alkylation of L-ascorbic acid
Robert S. Ward, Andrew Pelter and Atef Abd-El-Ghani	1303	Preparation of tetrahydrodibenzocyclooctene lignans and spirodienones by hypervalent iodine oxidation of phenolic dibenzylbutyrolactones
Mircea Vlassa, Ilie Ciocan-Tarta, Florin Margineanu and Ioan Oprean	1337	Synthesis of diynes by phase transfer catalysis in the presence of a Pd(0) catalyst
Yves L. Dory, John M. Mellor and Jerome F. McAleer	1343	Applications of pentafluorophenylester coupling in the synthesis of cyclodepsipeptides related to valinomycins
Janet R. Dawson, Yves L. Dory, John M. Mellor and Jerome F. McAleer	1361	Synthesis of novel potassium selective valinomycins
Yves L. Dory, John M. Mellor and Jerome F. McAleer	1379	Synthesis of phenyl substituted valinomycins
David C. Harrowven and Hon Suen Poon	1389	A Michael-initiated–condensation–elimination sequence for the stereoselective synthesis of maleate derivatives
András Kotschy, György Hajós, András Messmer and Gurnos Jones	1399	Selective ring opening of linearly and angularly fused triazolium salts
Margarita Jurczak, Dariusz Socha and Marek Chmielewski	1411	Isoxazolidin-5-one–isoxazolidine rearrangement, an entry to 3-amino-3-deoxy sugars
Rita Menicagli and Simona Samaritani	1425	1,4-Conjugate addition of the Reformatsky reagent to α-nitrostyrenes: a new synthesis of γ-nitroesters
Annamaria Deagostino, Cristina Prandi and Paolo Venturello	1433	Reaction of α,β-unsaturated and α-phenyl acetals with epoxides, promoted by lithium–potassium mixed base LICKOR: synthesis of homoallyl alcohols

Francesco Risitano, Giovanni Grassi, Francesco Caruso and Francesco Foti	1443	C,C- and C,N-linked dimers and 4-arylmethyl derivatives from 4-arylmethylene pyrazol-5-ones and isoxazol-5-ones with 2-arylbenzimidazolines
Atanas P. Venkov and Stela M. Statkova-Abeghe	1451	Synthesis of 3,4-dihydroisoquinolines, 2-alkyl(acyl)-1(2*H*)-3,4-dihydroisoquinolinones, 2-alkyl-1(2*H*)-isoquinolinones and 1-alkyl-2(2*H*)-quinolinones by oxidation with potassium permanganate
Andrew J. Locke, Nicolas Gouti, Christopher J. Richards, David E. Hibbs and Michael B. Hursthouse	1461	Addition of silyl enol ethers and silyl ketene acetals to ferrocenylmethyl ethers. Synthesis of precursors to chiral bridged ferrocenophanes
Mikael Jonassohn, Olov Sterner and Heidrun Anke	1473	Structure–activity relationships for unsaturated dialdehydes—XII. The reactivity of unsaturated dialdehydes towards triacetic acid lactone
	I	Instructions to Contributors

NUMBER 5

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
	1479	Corrigendum
Y. K. Tony Lam, O. D. Hensens, R. Ransom, R. A. Giacobbe, J. Polishook and D. Zink	1481	L-755,807, a new non-peptide bradykinin binding inhibitor from an endophytic *Microsphaeropsis* sp.
Takeshi Kitahara, Munenori Inoue, Shigeyuki Tamogami and Roman Kaiser	1487	Synthesis of both the enantiomers of methyl *cis*-(*Z*)-dehydrojasmonate, principal note for the scent of *Cymbidium goeringii*, to determine the absolute configuration
Roland Klösel, Stephan König, Stefan Lehnhoff and Rosa Maria Karl	1493	The 1,1-dianisyl-2,2,2-trichloroethyl group as 2'-hydroxyl protection of ribonucleotides
Dieter Enders, Dirk Backhaus and Jan Runsink	1503	Asymmetric [2,3]-sigmatropic Wittig rearrangement of chiral α-allyloxyhydrazones
Arwed Cleve, Karl-Heinrich Fritzemeier, Nikolaus Heinrich, Ulrich Kiar, Anke Müller-Fahrnow, Günter Neef, Eckhard Ottow and Wolfgang Schwede	1529	11β-Aryl steroids in the androstene series. The role of the 11β-region in steroid progesterone receptor interaction
Paul Müller, Corine Baud and Yvan Jacquier	1543	A method for rhodium(II)-catalyzed aziridination of olefins
Luzi Jenny, Hans-Jürg Borschberg and Pierre Acklin	1549	A highly stereoselective *in vitro* cyclization of dolabellatriene diterpenes into novel dolastadienes
Patrick Page, Casimir Blonski and Jacques Périé	1557	An improved chemical and enzymatic synthesis of new fructose derivatives for import studies by the glucose transporter in parasites
Valeria Costantino, Ernesto Fattorusso, Alfonso Mangoni, Massimo Di Rosa, Angela Ianaro and Pasquale Maffia	1573	Glycolipids from sponges—IV. Immunomodulating glycosyl ceramides from the marine sponge *Agelas dispar*
Orazio A. Attanasi, Simonetta Buratti, Paolino Filippone, Chiara Fiorucci, Elisabetta Foresti and Daniela Giovagnoli	1579	Reaction of thiocarboxylic acids with conjugated azoalkenes
Janez Plavec and Jyoti Chattopadhyaya	1597	Comparative assessment of structure and reactivity of wyosine by chemistry, spectroscopy and *ab initio* calculations

Nicanor Gálvez, Marcial Moreno-Mañas, Rosa M. Sebastián and Adelina Vallribera	1609	Dimethoxyethane as an alternative solvent for Schmidt reactions. Preparation of homochiral *N*-(5-oxazolyl)oxazolidinones from *N*-acetoacetyl derivatives of oxazolidinones
Bernd Schmidt, Philip Kocienski and Gillian Reid	1617	A synthesis of oxolenes and furans via oxacyclopentylidene chromium and molybdenum complexes
Adusumilli Srikrishna, T. Jagadeeswar Reddy and Ranganathan Viswajanani	1631	Reduction of quinolines to 1,2,3,4-tetrahydro derivatives employing a combination of $NaCNBH_3$ and $BF_3.OEt_2$
Katalin Nemák, Mária Ács, Zsuzsa M. Jászay, Dávid Kozma and Elemér Fogassy	1637	Study of the diastereoisomers formed between (*N*-alkyl)-pipecolic acid-anilides and 2*R*,3*R*-tartaric acid or *O*,*O*'-dibenzoyl-2*R*,3*R*-tartaric acid. Do the tartaric acids form molecular-complexes, instead of salts during optical resolutions?
Albert Guijarro, Balbino Mancheño, Javier Ortiz and Miguel Yus	1643	Lithiomethyl ethyl ether from chloromethyl ethyl ether via a DTBB-catalysed lithiation
Bogdan Doboszewski and Piet Herdewijn	1651	Branched-chain nucleosides: synthesis of 3'-deoxy-3'-*C*-hydroxymethyl-α-L-lyxopyranosyl thymine and 3'-deoxy-3'-*C*-hydroxymethyl-α-L-threofuranosyl thymine
Pier Paolo Giovannini, Stefania Hanau, Mario Rippa, Olga Bortolini, Marco Fogagnolo and Alessandro Medici	1669	*Bacillus stearothermophilus* alcohol dehydrogenase: a new catalyst to obtain enantiomerically pure bicyclic octen- and hepten-ols and -ones
Roberto Ballini, Giovanna Bosica and Paola Forconi	1677	Nitroaldol (Henry) reaction catalyzed by Amberlyst A-21 as a far superior heterogeneous catalyst
Gianfranco Cainelli, Mauro Panunzio, Elisa Bandini, Giorgio Martelli and Giuseppe Spunta	1685	Diastereofacial selectivity in the reaction of chiral *N*-trimethylsilyl imines with ester enolates: preparation of *trans*-azetidin-2-ones in high stereocontrolled fashion
Vladimir Dimitrov, Svetlana Simova and Kalina Kostova	1699	Highly effective and practical stereoselective synthesis of new homoallylic alcohols with (+)-camphor and (–)-fenchone skeleton
Tirumalai R. Kasturi, Pragnacharyulu V. P. Palle, Jitendra A. Sattigeri and Kaipenchery A. Kumar	1707	Novel reduction (Zn–AcOH) of DDHQ esters—a new route to tropone synthesis
Tadeusz Marek Krygowski and Michał Cyranski	1713	Separation of the energetic and geometric contributions to the aromaticity of π-electron carbocyclics
Augusto C. Tomé, José A. S. Cavaleiro and Richard C. Storr	1723	Generation and trapping of 5,6-dimethylenepyrimidin-4-ones in Diels–Alder and Michael additions
Augusto C. Tomé, José A. S. Cavaleiro and Richard C. Storr	1735	Pyrimidine *ortho*-quinodimethanes
Pejakala K. Vasudeva and Madhavarao Nagarajan	1747	Ring opening reactions of benzyl 3,4-anhydro-β-D-ribopyranoside with nucleophiles
Kandasamy Sakthivel, Tanmaya Pathak and Cheravakkattu G. Suresh	1767	5'-*O*-Benzoyl-2'-keto-3'-deoxy-α-uridine: first unambiguous synthesis, crystal structure and its use to establish the anomerisation of 2'-ketouridines under basic conditions
Frans J. Hoogesteger, Leonardus W. Jenneskens, Huub Kooijman, Nora Veldman and Anthony L. Spek	1773	Self-complementary hydrogen bonding of 1,1'-bicyclohexylidene-4,4'-dione dioxime. Formation of a non-covalent polymer
Maurizio Fagnoni, Matteo Vanossi, Mariella Mella and Angelo Albini	1785	Limits to oxidation of organic substrates. SET oxidative processes of commonly used solvents as revealed through the photochemical reaction with 1,2,4,5-benzenetetracarbonitrile
Albert Guijarro and Miguel Yus	1797	Polychlorinated materials as a source of polyanionic synthons
Ian Paterson and Michael V. Perkins	1811	Total synthesis of (–)-denticulatins A and B using efficient methods of acyclic stereocontrol

Manojbhai K. Patel, Raymond Fox and Paul D. Taylor 1835 Directed aminomethylation of 3-hydroxy-2(1*H*)-pyridinones and 3-hydroxy-4(1*H*)-pyridinones: synthesis of iso-deferiprone

D. John Procter, Mark Thornton-Pett and Christopher M. Rayner 1841 Discovery, characterisation, and utilisation of selenoxide–sulfonic acid salts: a new class of selenoxide-based oxidant and stable selenoxide equivalent

I Instructions to Contributors

NUMBER 6

Contents

iii Tetrahedron Prize for Creativity in Organic Chemistry

v Contributors to this Issue

vii Graphical Abstracts

TETRAHEDRON REPORT NUMBER 389

Oleg I. Kolodiazhnyi 1855 C–Element-substituted phosphorus ylids

ARTICLES

Miwa Hashimoto, Kimiko Hashimoto and Haruhisa Shirahama 1931 Acyclic analogs of kainoids: their syntheses and depolarizing activities

Toshinobu Ohno, Hideo Aramaki, Hideki Nakahiro and Ikuzo Nishiguchi 1943 Electroreductive acylation of activated olefins using a reactive metal anode

Shin-ichi Fukuzawa, Hideki Furuya and Teruhisa Tsuchimoto 1953 Alkylation–annulation of halo esters with organometallic reagent/SmI_2 couple leading to cycloalkanols: a facile cyclopropanol synthesis from a 3-halo ester

Heinz Langhals, Barbara Wagner and Kurt Polborn 1961 The oxidative coupling of coumaranone with disulfur dichloride

Heidi M. Muchall, Klaus Kowski, Paul Rademacher, Andreas Fuss, Ralf Neuberger, Helmut Quast, Peter Komnick and Wolfram Sander 1965 Electronic structure and gas-phase thermolysis of 4-substituted 3,3,5,5-tetramethyl-3,5-dihydro-4*H*-pyrazoles studied by photoelectron spectroscopy. First evidence for an alkylideneselenirane

Gottfried Märkl, Markus Hafner, Peter Kreitmeier, Thomas Burgemeister, Fritz Kastner, Michael Porsch and Jörg Daub 1981 Tetraoxa[24]porphyrinogen(4.0.4.0)/tetraoxa[22]porphyrin(4.0.4.0) dication. A further isomer of the aromatic 22π-tetraoxaporphyrins

Brunhilde Voigt, Jürgen Schmidt and Günter Adam 1997 Synthesis of 24-epiteasterone, 24-epityphasterol and their B-homo-6a-oxalactones from ergosterol

H. J. Cristau, M. Taillefer, J. P. Urbani and A. Fruchier 2005 Reactivity of substituted and unsubstituted diphenylphosphonium diylides towards carbonic anhydride derivatives

Krystyna Baczko, Wang-Qing Liu, Bernard P. Roques and Christiane Garbay-Jaureguiberry 2021 New synthesis of D,L-Fmoc protected 4-phosphonomethylphenylalanine derivatives and their enzymatic resolution

Véronique Nardello, Nathalie Azaroual, Isabelle Cervoise, Gaston Vermeersch and Jean-Marie Aubry 2031 Synthesis and photooxidation of sodium 1,3-cyclohexadiene-1,4-diethanoate: a new colorless and water-soluble trap of singlet oxygen

Françoise Raynaud, Ulysse Asseline, Victoria Roig and Nguyen Thanh Thuong 2047 Synthesis and characterization of O^6-modified deoxyguanosine-containing oligodeoxyribonucleotides for triple-helix formation

Guy Solladié, Dominique Boeffel and Jean Maignan 2065 Aromatic ring synthesis by 1,3-Michael–Claisen annulation: application to a Trolox analogue and to Precocene II

Mihaela Gulea-Purcarescu, Elie About-Jaudet, Noël Collignon, Monique Saquet and Serge Masson 2075 Sigmatropic [2,3]-Wittig rearrangement of α-allylic-heterosubstituted methylphosphonates—II. Rearrangement in the nitrogen series

Bruno Principato, Michel Maffei, Chhan Siv, Gérard Buono and Gilbert Peiffer	2087	Palladium catalysed allylic acetoxylation of dialkyl allyl phosphonates
José Sepulveda-Arques, Trinidad Armero-Alarte, Alberto Acero-Alarcón, Elena Zaballos-García, Belén Yruretagoyena Solesio and Jesus Ezquerra Carrera	2097	Stereoselective ring transformation of *N*-alkyl aziridines into oxazolidin-2-ones
Jac C. H. M. Wijkmans, Nico J. Meeuwenoord, Wim Bloemhoff, Gijs A. van der Marel and Jacques H. van Boom	2103	Solid phase synthesis of alkylphosphonopeptides
Grant A. McNaughton-Smith and Richard J. K. Taylor	2113	The preparation of 9-substituted Δ^5-octenolides: synthesis of 8-deoxy-pseudo-ascidiatrienolide C
Philip C. Bulman Page, Robin D. Wilkes, Ernest S. Namwindwa and Michael J. Witty	2125	Enantioselective preparation of 2-substituted-1,3-dithiane 1-oxides using modified Sharpless sulphoxidation procedures
Vincenzo Caló, Vito Fiandanese, Angelo Nacci and Angela Volpe	2155	Allylated ketosulphides of benzothiazole as intermediates for stereoselective synthesis of allyl ketones, allyl thiiranes and dienes
M. Teresa Mujica, María M. Afonso, Antonio Galindo and J. Antonio Palenzuela	2167	Hetero Diels–Alder versus Mukaiyama aldol pathways in the reaction of monoactivated dienes and aldehydes. A Lewis acid study
José Luis García Ruano, Amelia Tito and Rafael Culebras	2177	Stereoselective addition of organometallic reagents to β-hydroxyketones
Guo-qiang Lin and Zhi-cai Shi	2187	A facile formal synthesis of D-ribo-C_{18}-phytosphingosine
Subhas Chandra Roy and Pijus Kumar Mandal	2193	Regio- and stereoselective formation of dihydrofurans by ceric ammonium nitrate mediated oxidative [3 + 2] cycloaddition of 1,3-diketones to cinnamic esters
Joseph P. Michael and Andrew S. Parsons	2199	Chemoselective reactions of vinylogous amides, and the synthesis of two *Peripentadenia* alkaloids
Modachur G. Murugesh, Kandasamy Subburaj and Girish K. Trivedi	2217	Regioselective synthesis of substituted pterocarpans and pterocarpenes. Lewis acid Ti(IV) promoted formal (3 + 2) cycloaddition reactions
Alethea B. Tabor	2229	Synthesis of a peptide–intercalator hybrid based on the bZIP motif from GCN4
Derek N. Hickman, Kevin J. Hodgetts, Peter S. Mackman, Timothy W. Wallace and J. Michael Wardleworth	2235	The preparation of substituted 3,4-dihydro-1(2*H*)-naphthalenones from benzocyclobutenones via sequential thermal electrocyclic reactions
Deevi Basavaiah and Subramanian Pandiaraju	2261	Nucleophilic addition of triethyl phosphite to acetates of the Baylis–Hillman adducts: stereoselective synthesis of (*E*)- and (*Z*)-allylphosphonates
	I	Instructions to Contributors

NUMBER 7

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
	2269	Corrigendum
Boulos Zacharie, Timothy P. Connolly, Rabindra Rej, Giorgio Attardo and Christopher L. Penney	2271	A short synthesis of 4-substituted 1-(hydroxyalkyl)-1*H*-pyrazolo[3,4-*d*]pyrimidines

John C. Gilbert and Steven Kirschner	2279	Pericyclic reactions of cyclobutyne: an exception to orbital symmetry considerations
Qi Gao and William L. Parker	2291	The 'hydrophobic collapse' conformation of paclitaxel (Taxol®) has been observed in a non-aqueous environment: crystal structure of 10-deacetyl-7-epitaxol
Yoshimasa Fukazawa, Kousaku Yoshimura, Shigeru Sasaki, Masumi Yamazaki and Toshiya Okajima	2301	Conformational isomers of the trimethyl ethers of monodeoxycalix[4]-arenes
Masashi Tsuda, Kenjiro Inaba, Naoko Kawasaki, Kaori Honma and Jun'ichi Kobayashi	2319	Chiral resolution of (±)-keramaphidin B and isolation of manzamine L, a new β-carboline alkaloid from a sponge *Amphimedon* sp.
Yanyan Yang, Takeharu Haino, Shuji Usui and Yoshimasa Fukazawa	2325	Shielding effect of ether C–O bond obtained from proton chemical shifts of 4-oxa-5α- and 4-oxa-5β-androstan-17-ones
Xiao-xia Wang, Hideyuki Shigemori and Jun'ichi Kobayashi	2337	Taxuspines K, L, and M, new taxoids from Japanese yew *Taxus cuspidata*
Hideo Tanaka, Ryo Kikuchi and Sigeru Torii	2343	Chemoselective aerobic oxidation of penicillin and cephalosporin derivatives into sulfoxides
Tsuyoshi Satoh and Koji Takano	2349	A method for generation of α-halo carbanions (carbenoids) from aryl α-haloalkyl sulfoxides with alkylmetals
Hiroshi Hirota, Yasuhiko Tomono and Nobuhiro Fusetani	2359	Terpenoids with antifouling activity against barnacle larvae from the marine sponge *Acanthella cavernosa*
Yoshiaki Kamano, Hui-ping Zhang, Hiroshi Morita, Hideji Itokawa, Osamu Shirota, George R. Pettit, Delbert L. Herald and Cherry L. Herald	2369	Conformational analysis of a marine antineoplastic macrolide, bryostatin 10
Waldemar Adam, Claus van Barneveld and Dieter Golsch	2377	Direct synthesis of 3-aryl-1,2,4,5-tetrazine *N*-1-oxides by the oxidation with methyl(trifluoromethyl)dioxirane
Markus Albrecht	2385	Linear (CH_2)-bridged oligo(catechol) compounds for metal-directed self-organization processes
Astrid Zervosen, Andreas Stein, Holger Adrian and Lothar Elling	2395	Combined enzymatic synthesis of nucleotide (deoxy) sugars from sucrose and nucleoside monophosphates
Aïcha Amougay, Olivier Letsch, Jean-Pierre Pete and Olivier Piva	2405	Photorearrangement of *N*-alkanoyl β-enaminones. Application to the synthesis of α-amino-β,γ-unsaturated acid derivatives
Fabrice Vergne, Karolin Partogyan, David J. Aitken and Henri-Philippe Husson	2421	An original synthesis of *trans*-1,2-diaminocyclobutane
D. Michel and M. Schlosser	2429	α-Fluorocarbonyl compounds by isomerization of 2-fluorooxiranes
Carme Brosa, Joan Miquel Capdevila and Ismael Zamora	2435	Brassinosteroids: a new way to define the structural requirements
János Marton, Zoltán Szabó, István Csorvássy, Csaba Simon, Sándor Hosztafi and Sándor Makleit	2449	Reaction of morphinan-6,8-dienes with azadienophiles
Giorgio Cerichelli, Luciana Luchetti and Giovanna Mancini	2465	Surfactant control of the *ortho*/*para* ratio in the bromination of anilines—III
Daniele Casarini, Lodovico Lunazzi and Richard Verbeek	2471	Conformational studies by dynamic NMR—LVI. Enantiotopomerization and conformational analysis of hindered aryl alkyl ketones investigated by dynamic and solid state NMR
Abraham Thomas, Gopinathan Anilkumar and Vijay Nair	2481	Photolytic double decarbonylation route to highly substituted indenes and benzene derivatives

Soyfur Miah, Alexandra M. Z. Slawin, Christopher J. Moody, Scott M. Sheehan, Joseph P. Marino, Jr, Mark A. Semones, Albert Padwa and Ian C. Richards	2489	Ligand effects in the rhodium(II) catalysed reactions of diazoamides and diazoimides
Jack E. Baldwin, Robert M. Adlington, Daniel G. Marquess, Andrew R. Pitt, Michael J. Porter and Andrew T. Russell	2515	Evidence for an insertion–homolysis mechanism for carbon–sulphur bond formation in penicillin biosynthesis—I. Synthesis of tripeptide probes
Jack E. Baldwin, Robert M. Adlington, Daniel G. Marquess, Andrew R. Pitt, Michael J. Porter and Andrew T. Russell	2537	Evidence for an insertion–homolysis mechanism for carbon–sulphur bond formation in penicillin biosynthesis—II. Incubation and interpretation
Maria Cervera, Jordi Marquet and Xavier Martín	2557	Charge control in the S_NAr reaction. *meta* Substitution with respect to the activating nitro group in 3,4-dihalogenonitrobenzenes
Gert-Jan M. Gruter, Otto S. Akkerman and Friedrich Bickelhaupt	2565	The formation of catenanes. The Möbius strip approach revisited
Rita Annunziata, Mauro Cinquini, Franco Cozzi, Valentina Molteni and Olaf Schupp	2573	Stereoselective one-pot synthesis of β-lactams by Lewis acid promoted condensation of silylketene thioacetals with imines
Rita Annunziata, Maurizio Benaglia, Mauro Cinquini, Franco Cozzi, Oscar Martini and Valentina Molteni	2583	Stereoselective one-pot synthesis of β-lactams by reaction of 2-pyridyl-thioesters with imines in the presence of $AlBr_3$ or $EtAlCl_2$
Kristof J. Dubois, Christine C. Fannes, Frans Compernolle and Georges J. Hoornaert	2591	4,6-Dichloro-2-oxa-5-azabicyclo[2.2.2]oct-5-en-3-ones and their use in the synthesis of 1,6-dihydro-6-oxo-2-pyridine- and 6-oxo-2-piperidinecarboxylates
Saskia Louwrier, Martin Ostendorf, Arnoud Boom, Henk Hiemstra and W. Nico Speckamp	2603	Studies towards the synthesis of (+)-ptilomycalin A; stereoselective *N*-acyliminium ion coupling reactions to enantiopure C-2 substituted lactams
Saskia Louwrier, Antonin Tuynman and Henk Hiemstra	2629	Synthesis of bicyclic guanidines from pyrrolidin-2-one
Joost T. M. van Dijk, Berit J. van de Panne, Annemarie C. Bleeker, Johan Lugtenburg and Jan Cornelisse	2647	Spectrometry and reactivity of benzanthrenyl and 1-hydroperylenyl anions
	I	Instructions to Contributors

NUMBER 8

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
		TETRAHEDRON REPORT NUMBER 390
Peter Timmerman, Willem Verboom and David N. Reinhoudt	2663	Resorcinarenes
		ARTICLES
Derek H. R. Barton, Giovanni Fontana and Yun Yang	2705	The invention of radical reactions—XXXV. A novel radical fission reaction of *N*-sulfonylthioxocarbamates
Derek H. R. Barton, Joseph Cs. Jaszberenyi, Wansheng Liu and Tetsuro Shinada	2717	The invention of radical reactions—XXXVI. Synthetic studies related to 3-deoxy-D-*manno*-2-octulosonic acid (KDO)

Jorge A. Palermo, María Florencia Rodríguez Brasco and Alicia M. Seldes	2727	Storniamides A–D: alkaloids from a Patagonian sponge *Cliona* sp.
Vassilios Roussis, William Fenical, Constantinos Vagias, Jean-Michel Kornprobst and Joseph Miralles	2735	Labiatamides A, B, and other eunicellan diterpenoids from the Senegalese gorgonian *Eunicella labiata*
Richard C. Larock and Eul Kgun Yum	2743	Palladium-catalyzed annulation of vinylic cyclopropanes and cyclobutanes
Dinesh Rele, Ning Zhao, Koji Nakanishi and Nina Berova	2759	Acyclic 1,2-/1,3-mixed pentols. Synthesis and general trends in bichromophoric exciton coupled circular dichroic spectra
Ning Zhao, Nina Berova, Koji Nakanishi, Michel Rohmer, Pascale Mougenot and Uwe J. Jürgens	2777	Structures of two bacteriohopanoids with acyclic pentol side-chains from the cyanobacterium *Nostoc* PCC 6720
Lakshmi B. Akella and Robert Vince	2789	Palladium-catalyzed synthesis of *cis*-2-[4-(9*H*-purin-9-yl)-2-cyclopenten-1-yl]ethanol analogues
Hiroshi Morita, Natsuko Yoshida, Koichi Takeya, Hideji Itokawa and Osamu Shirota	2795	Configurational and conformational analyses of a cyclic octapeptide, lyciumin A, from *Lycium chinense* Mill.
Shuki Araki, Tsunehisa Hirashita, Ken Shimizu, Takahiro Ikeda and Yasuo Butsugan	2803	Reaction of α-halo organoindium reagents with carbonyl compounds and electron-deficient alkenes
Tomoyuki Imada, Hideomi Kijima, Masayuki Takeuchi and Seiji Shinkai	2817	Selective binding of glucose-6-phosphate, 3,4-dihydroxyphenylalanine (DOPA) and their analogs with a boronic acid appended metalloporphyrin
Masanori Watanabe, Hiroshi Okada, Takayuki Teshima, Michihiko Noguchi and Akikazu Kakehi	2827	A facile and regio- and stereo-selective preparation of bicyclic guanidines by iodocyclization of 3-(alk-2-enyl)-2-(substituted amino)-1-imidazolin-4-ones
Toshiaki Murai, Kaori Kakami, Naoshi Itoh, Takahiro Kanda and Shinzi Kato	2839	Stereoselective generation and trapping of lithium eneselenolates leading to ketene selenothioacetals and selenothioesters
Yoshimasa Fukazawa, Yanyan Yang, Tatsuhiko Hayashibara and Shuji Usui	2847	Shielding effect of carbonyl group and its application to the conformational analysis of 1,1,10,10-tetramethyl[3.3]metacyclophane-2,11-dione
Akio Kakefuda, Akira Masuda, Yoshihito Ueno, Akira Ono and Akira Matsuda	2863	Nucleosides and nucleotides—CXLVII. Synthesis of DNA dodecamers containing oxetanocin A and (2*R*,3*R*)-2-*C*-(adenin-9-yl)-1,4-anhydro-2,3-dideoxy-3-*C*-hydroxymethyl-D-arabitol
Yimin Jiang and Minoru Isobe	2877	Pseudoenantiomeric heteroconjugate addition approach for synthesis of spiro segment of tautomycin
Dieter Enders, Olivier Piva and Frank Burkamp	2893	Asymmetric synthesis of vicinal thioether alcohols by diastereoselective 1,2-addition of carbon nucleophiles to enantiomerically enriched α-sulfenylated aldehydes
Dieter Enders, Peter Hecker and Oliver Meyer	2909	A novel approach to 2-amino-1,3-dienes by coupling of α-chloro enamines and alkenyl lithium compounds
Gunter Schüle and Thomas Ziegler	2925	Efficient convergent block synthesis of a pyruvated tetrasaccharide 5-aminopentyl glycoside related to *Streptococcus pneumoniae* type 27
Peter Belser, Stefan Bernhard and Urs Guerig	2937	Synthesis of mono- and dialkylsubstituted 1,10-phenanthrolines
Andreas Schick, Thomas Kolter, Athanassios Giannis and Konrad Sandhoff	2945	Synthesis of phosphoramide analogues of sphinganine-1-phosphate
R. Kluge, M. Schulz and S. Liebsch	2957	Diastereoselective epoxidation of olefins by organo sulfonic peracids—II
Sergej V. Pasenok, Marijn E. de Roos and Wolfgang K. Appel	2977	New method of preparation of fluoro compounds via utilisation of ammonium and phosphonium perfluorocyclobutane ylides as fluorination reagents
E. Desarbre, L. Savelon, O. Cornec and J. Y. Mérour	2983	Oxidation of indoles and 1,2-dihydro-3*H*-indol-3-ones

N. Oget, F. Chuburu, J. J. Yaouanc and H. Handel	2995	Cyclenphosphine sulfide: fluxional behaviour and ambident reactivity
Jean-Christophe Truffert, Ulysse Asseline, André Brack and Nguyen T. Thuong	3005	Synthesis, purification and characterization of two peptide–oligonucleotide conjugates as potential artificial nucleases
Xi-Kui Jiang, Guo-Zhen Ji and John Rong-Yuan Xie	3017	In search of the spin-delocalization effect from the correlation analysis of relative rates of the trichloromethyl-bromo-addition reactions to fourteen *p*-Y-substituted phenylacetylenes
Egle M. Beccalli, Alessandro Marchesini and Tullio Pilati	3029	Diels–Alder reactions of (*Z*)-ethyl 3-[(1-ethoxycarbonyloxy-2-methoxy)-ethenyl]-2-(ethoxycarbonyloxy)indole-1-carboxylate. Synthesis of the carbazole alkaloid carbazomycin B
José Mª Quintela, María J. Moreira and Carlos Peinador	3037	A ready one-pot preparation for pyrrolo[2,1-*f*][1,2,4]triazine and pyrazolo-[5,1-*c*]pyrimido[4,5-*e*][1,2,4]triazine derivatives
Kalman Vogel, Jeffrey Sterling, Yaakov Herzig and Abraham Nudelman	3049	α-1-Tributyltin-*O*-2,3-bisacetyl-4,6-ethylidene-glucose as a convenient glycosidation reagent: an efficient synthesis of etoposide
	I	Tetrahedron Reports on Organic Chemistry
	XXIII	Instructions to Contributors

NUMBER 9

Contents

TETRAHEDRON SYMPOSIA-IN-PRINT NUMBER 59

NOVEL APPLICATIONS OF HETEROCYCLES IN SYNTHESIS

Guest Editor: A. R. KATRITZKY

University of Florida, Gainesville, Florida, USA

	iii	Contributors to this Issue
	vii	Announcement: Tetrahedron Symposia-in-Print
	xiii	Preface
	xv	Graphical Abstracts
Alessandro Dondoni, Alberto Marra, Isabel Rojo and Marie-Christine Scherrmann	3057	Thiazolylketol acetates as glycosyl donors. Stereoselective synthesis of α-linked ketodisaccharides
Leo A. Paquette, Tina M. Morwick, Joanna T. Negri and Robin D. Rogers	3075	Addition of 2,3-dihydro-5-furanyllithium to diisopropyl squarate as a means for the rapid generation of structurally complex oxygen-containing tetraquinane networks
José Barluenga, Miguel Tomás, Alfredo Ballesteros and Jian-She Kong	3095	Simple synthesis of 2*H*-1,3-oxazines and their stereoselective transformation into 1,3-aminoalcohols and azetidines
Jeffrey M. Schkeryantz and William H. Pearson	3107	An efficient synthesis of (±)-crinane using an intramolecular azide–olefin cycloaddition
Lindsay A. White and Richard C. Storr	3117	Dihydrothiophenes as precursors to fused quinolines, quinolones and coumarins via *o*-quinodimethane intermediates

John P. Cherkauskas, Andrew M. Klos, Robert M. Borzilleri, Joseph Sisko, Steven M. Weinreb and Masood Parvez	3135	A new method for preparation of 3,6-dihydro-2*H*-1,3-oxazines and explorations of their use in stereoselective synthesis of 1,3-amino alcohol derivatives
Ruey-Fen Liao, Joseph W. Lauher and Frank W. Fowler	3153	The application of the 2-amino-4-pyrimidones to supramolecular synthesis
Hamish McNab and Kirsti Withell	3163	Synthesis of 2-substituted 1,3-oxazin-6-ones by gas-phase pyrolysis
Rasmus P. Clausen and Jan Becher	3171	The 1,2,3-thiadiazole route to new vinylogue tetrathiafulvalenes
Mieczysław Makosza, Michał Sypniewski and Tomasz Glinka	3189	Vicarious nucleophilic substitution of hydrogen proceeding via heterocyclic ring opening
Seock-Kyu Khim, Ericka Cederstrom, Dino C. Ferri and Patrick S. Mariano	3195	SET-photosensitized reactions of α-silylamino-enones and ynones proceeding by 6-*endo* α-amino radical cyclization pathways
Ursula Mävers, France Berruex and Manfred Schlosser	3223	3-Fluoro-2-quinolones from anilines
Stephen F. Martin, Jeffrey A. Dodge, Laurence E. Burgess, Chris Limberakis and Michael Hartmann	3229	Novel approach to the ansamycin antibiotics macbecin I and herbimycin A. A formal total synthesis of (+)-macbecin I
Albert Padwa, David J. Austin, Alan T. Price and M. David Weingarten	3247	Studies on the intramolecular cycloaddition reaction of isomünchnones derived from *N*-alkenyl substituted diazoimides
Jacek Z. Brzezinski, Henryk B. Bzowski and Jan Epsztajn	3261	A concise regioselective synthesis of hydroxyazaisoindolinones and their conversion into pyridopyridazinones
Lucjan Strekowski, Lubomir Janda, Steven E. Patterson and Johnny Nguyen	3273	Amination by lithium alkylamide reagents of ketimines derived from 2-(trifluoromethyl)anilines and methyl halophenyl ketones and their cyclization products 2-(halophenyl)quinolin-4-amines
Jean-Bernard Behr, Albert Defoin, Joaquim Pires, Jacques Streith, Ludwig Macko and Margaretha Zehnder	3283	Chiral *N*-dienyl-L-pyroglutamic esters in asymmetric hetero-Diels–Alder reactions with acylnitroso dienophiles
Norbert De Kimpe, Christian Stevens and Miklos Virag	3303	Rearrangement of α,δ-dichloroaldimines to 2-formylpyrrolidines: α,α-azacyclobisalkylation of aldehydes
Carlo Dell'Erba, Marino Novi, Giovanni Petrillo, Domenico Spinelli and Cinzia Tavani	3313	Synthetic exploitation of the ring-opening of 3,4-dinitrothiophene. Access to 1,4-disubstituted 2,3-dinitro-1,3-butadienes and 2,3-diaminobutanes
P. E. Maligres, S. A. Weissman, V. Upadhyay, S. J. Cianciosi, R. A. Reamer, R. M. Purick, J. Sager, K. Rossen, K. K. Eng, D. Askin, R. P. Volante and P. J. Reider	3327	Cyclic imidate salts in acyclic stereochemistry: diastereoselective *syn*-epoxidation of 2-alkyl-4-enamides to epoxyamides
Rudolph A. Abramovitch, Ichiro Shinkai, B. J. Mavunkel, K. M. More, Sean O'Connor, Gino H. Ooi, William T. Pennington, P. C. Srinivasan and James R. Stowers	3339	New ring systems from 1,2-benzisothiazole-1,1-dioxides and related compounds
Jason Nichols, Tara Tralka, Bradley K. Goering, Charles F. Wilcox and Bruce Ganem	3355	Heterocyclic routes to polysubstituted cyclopentanes: molecular modelling of electrophilic additions to di- and trisubstituted cyclopentenes
Igor D. Sadekov, Alexander A. Maksimenko and Vladimir I. Minkin	3365	3*H*(3*R*)-Benzo-2,1-oxatelluroles as synthons in synthesis of *o*-alkyltellurophenyl carbonyl compounds
	I	Instructions to Contributors

NUMBER 10

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
	3375	Corrigendum
		TETRAHEDRON REPORT NUMBER 391
Marcial Moreno-Mañas, Jordi Marquet and Adelina Vallribera	3377	Transformations of β-dicarbonyl compounds by reactions of their transition metal complexes with carbon and oxygen electrophiles
		ARTICLES
Craig J. Mossman and Jeffrey Aubé	3403	Intramolecular Schmidt reactions of alkyl azides with ketals and enol ethers
Ahmad R. Al Dulayymi, Juma'a R. Al Dulayymi, Mark S. Baird, Michelle E. Gerrard, Gani Koza, Samantha D. Harkins and Evan Roberts	3409	1,2,2-Tribromocyclopropanecarboxylic acid and derivatives—valuable intermediates for four carbon cyclopropane and cyclopropene synthons
Suresh Das, J. S. Dileep Kumar, Kalchar Shivaramayya and Manapurathu V. George	3425	Formation of lactams via photoelectron-transfer catalyzed reactions of *N*-allylamines with α,β-unsaturated esters
A. Nangia and G. Prasuna	3435	Studies on Horner–Wadsworth–Emmons reaction in base sensitive ketones: synthesis of (–)-mitsugashiwalactone and formal synthesis of (+)-iridomyrmecin, (–)-isoiridomyrmecin and (+)-teucriumlactone
Nehal M. Elwan, Hyam A. Abdelhadi, Taysser A. Abdallah and Hamdi M. Hassaneen	3451	Synthesis of [1,2,4]triazolo[3,4-*a*]isoquinolines and pyrrolo[2,1-*a*]isoquinolines using α-keto hydrazonoyl halides
Raquel Alguacil, Francisco Fariña and M. Victoria Martín	3457	1,3-Dipolar cycloaddition of nitrile oxides to 2(5*H*)-furanones substituted at the 5-position by sulphur bearing groups
Harry Heaney and George Papageorgiou	3473	The use of bis(aminol) ethers derived from aliphatic primary amines in the synthesis of secondary and tertiary amines
Ponnusamy Velusamy, Kasi Pitchumani and Chockalingam Srinivasan	3487	Selectivity in bromination of aniline and N-substituted anilines encapsulated in β-cyclodextrin
Anna Bernardi, Chiara Marchionni, Barbara Novo, Katia Karamfilova, Donatella Potenza, Carlo Scolastico and Pietro Roversi	3497	Stereoselective conjugate addition of lithium and titanium enolates to γ-alkoxy enones
Giancarlo Doddi, Maria Cristina Fazio, Loredana Luvidi, Paolo Mencarelli and Gianfranco Ercolani	3509	Effect of alkali cations on the methoxide ion addition to corands incorporating a thiopyrylium subunit
Minze T. Rispens, Onko Jan Gelling, André H. M. de Vries, Auke Meetsma, Fré van Bolhuis and Ben L. Feringa	3521	Catalytic epoxidation of unfunctionalized alkenes by dinuclear nickel(II) complexes
Giancarlo Fantin, Marco Fogagnolo, Pier Paolo Giovannini, Alessandro Medici, Paola Pedrini, Fausto Gardini and Rosalba Lanciotti	3547	Anti-Prelog microbial reduction of prochiral carbonyl compounds
Bianca F. Bonini, Enza Masi, Stefano Masiero, Germana Mazzanti and Paolo Zani	3553	Protiodesilylation of 3-trimethylsilyl-2-thiabicyclo[2.2.1]hept-5-enes and derivatives: a stereochemical study
Pilar Forns, Anna Diez, Mario Rubiralta, Xavier Solans and Mercè Font-Bardia	3563	Synthetic applications of 2-(1,3-dithian-2-yl)indoles—VI. Synthesis of 20-epidasycarpidone

Korien Zegelaar-Jaarsveld, Howard I. Duynstee, Gijs A. van der Marel and Jacques H. van Boom	3575	Iodonium ion-assisted synthesis of tetrameric fragments corresponding to the cell wall phenolic glycolipids of *Mycobacterium kansasii* serovars II and IV
Korien Zegelaar-Jaarsveld, Sander A. W. Smits, Nicole C. R. van Straten, Gijs A. van der Marel and Jacques H. van Boom	3593	Iodonium ion-assisted synthesis of a tetrameric fragment corresponding to the cell wall phenolic glycolipids of *Mycobacterium kansasii* serovar I
Duncan M. Gill, Neil A. Pegg and Christopher M. Rayner	3609	Lewis acid induced rearrangement of 2,3-epoxy sulfides; regiospecific trapping of thiiranium ion intermediates with nitrogen heterocycles and amides. Use of imines as nucleophilic equivalents for the selective mono-alkylation of primary amines
Falmai Binns, Roy Hayes, Kevin J. Hodgetts, Suthiweth T. Saengchantara, Timothy W. Wallace and Christopher J. Wallis	3631	The preparation and electrocyclic ring-opening of cyclobutenes: stereo-controlled approaches to substituted conjugated dienes and trienes
Veejendra K. Yadav and Kamal K. Kapoor	3659	KF adsorbed on alumina effectively promotes the epoxidation of electron deficient alkenes by anhydrous *t*-BuOOH
K. C. Rajanna, Florence Solomon, Mir Moazzam Ali and P. K. Saiprakash	3669	Kinetics and mechanism of Vilsmeier–Haack synthesis of 3-formyl chromones derived from *o*-hydroxy aryl alkyl ketones: a structure–reactivity study
Ana M. Costero, C. Andreu, M. Pitarch and R. Andreu	3683	Macrolactones and crown ethers derived from biphenyl. Electronic and steric influence of substituents on its complexation ability
Vishwakarma Singh and B. Jagadish	3693	Rearrangement in *endo* annulated bicyclo[2.2.2]octenone framework: a new route to functionalized tricyclo[5.3.1.$0^{2,6}$] ring system and *cis:syn:cis* tricyclopentanoids
Norbert De Kimpe and Marian Keppens	3705	Novel routes to indoles, indolines, quinolines and tetrahydroquinolines from *N*-(cyclohexylidene)amines
Mark J. Beard, Jonathan H. Bailey, David T. Cherry, Mark G. Moloney, Sung Bo Shim, Kathryn A. Statham, Mark J. Bamford and R. Brian Lamont	3719	Functionalised pyrrolidinones derived from (*S*)-pyroglutamic acid
M. Jayaraman, V. Srirajan, A. R. A. S. Deshmukh and B. M. Bhawal	3741	Modulating steric effects in diastereoselective Staudinger reaction: synthesis of optically pure *cis*-β-lactams
Anthony Murray, George R. Proctor and P. John Murray	3757	An efficient route to the pyrrolizidine ring system via an *N*-acyl anion cyclisation process
	I	Instructions to Contributors

NUMBER 11

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
	3767	Corrigendum
		TETRAHEDRON REPORT NUMBER 392
Elke Schoffers, Adam Golebiowski and Carl R. Johnson	3769	Enantioselective synthesis through enzymatic asymmetrization
		ARTICLES
Dustin L. McMinn and Marc M. Greenberg	3827	Novel solid phase synthesis supports for the preparation of oligonucleotides containing 3'-alkyl amines

David J. Hart and Anthony Mannino	3841	Synthesis of defucogilvocarcin V isosteres via MAD-mediated conjugate addition of carbanions to naphthoquinone ketals
Peter W. K. Woo and J. Ronald Rubin	3857	Chalcomycin: single-crystal X-ray crystallographic analysis; biosynthetic and stereochemical correlations with other polyoxo macrolide antibiotics
Jeongrim Lee and Rawle I. Hollingsworth	3873	Isolation and characterization of a β-1-O-acyl-β-1,2-diglucosyl glycoside from the membranes of a Gram positive bacterium *Sarcina ventriculi*
Hugo J. Monteiro and Julio Zukerman-Schpector	3879	A new practical synthesis of (+)-grandisol from (+)-citronellol using an intramolecular carbenoid cyclization
Kazuo Fujimoto, Yuichiro Tokuda, Hirofumi Maekawa, Yoshiharu Matsubara, Takumi Mizuno and Ikuzo Nishiguchi	3889	Selective and one-pot formation of phenols by anodic oxidation
Koichi Fukase, Ikuko Kinoshita, Takeshi Kanoh, Yoshihiko Nakai, Atsushi Hasuoka and Shoichi Kusumoto	3897	A novel method for stereoselective glycosidation with thioglycosides: promotion by hypervalent iodine reagents prepared from PhIO and various acids
Katsuji Ito, Miwa Yoshitake and Tsutomu Katsuki	3905	Chiral bipyrindine and biquinoline ligands: their asymmetric synthesis and application to the synthesis of *trans*-whisky lactone
Nobuo Kato, Hiroaki Okamoto and Hitoshi Takeshita	3921	Total synthesis of optically active cotylenol, a fungal metabolite having a leaf growth activity. Intramolecular ene reaction for an eight-membered ring formation
Carlos García-Echeverría and Robert Häner	3933	A convenient method for the preparation of oligonucleotide 5'-phosphates
Monika Mazik, Roland Boese and Reiner Sustmann	3939	Reaction of 1,2-diketones with *N,N*-dimethylcyanamide in the presence of titanium(IV) chloride
Christoph Kroesche and Martin G. Peter	3947	Detection of melanochromes by MALDI–TOF mass spectrometry
Valérie Meille, Emmanuelle Schulz, Marc Lemaire, René Faure and Michel Vrinat	3953	An efficient synthesis of pure 4,6-dimethyldibenzothiophene
W. Russell Bowman, J. Anthony Forshaw, Kevin P. Hall, Jonathan P. Kitchin and Andrew W. Mott	3961	Reduction of Ag(I) by 1-acyl-2-arylhydrazines: mechanism of photographic infectious development
Anna-Maria Lluch, Mariona Gibert, Francisco Sánchez-Baeza and Angel Messeguer	3973	Studies on dioxirane chemoselectivity: the oxidation of an enamino moiety present in a Fischer carbene complex
Vladimir V. Kovalev, Andrey K. Rozov and Elvira A. Shokova	3983	Novel approach to trisubstituted adamantanes
Mohammad Ilyas and Mehtab Parveen	3991	Biomimetic synthesis of some novel coumarin dimers
Antonio Arcadi, Orazio A. Attanasi, Lucia De Crescentini, Elisabetta Rossi and Franco Serra-Zanetti	3997	Synthesis and transition metal catalysed reactions of 1-ureido-3-propargyl-2,3-dihydropyrrol-2-ols, 1-ureido-3-propargylpyrroles and 1-ureido-3-propargyl-3-phosphono-1*H*-pyrrol-2(3*H*)-ones
Daniel Solé, Joan Bosch and Josep Bonjoch	4013	3a-(*o*-Nitrophenyl)octahydroindol-4-ones: synthesis and spectroscopic analysis
Vijay Nair and Sasi Kumar	4029	[4π + 2π]Cycloaddition reactions of *o*-benzoquinones with symmetrical 6,6-dialkyl and cycloalkylfulvenes: formation of bicyclo[2.2.2]octene diones and cyclopenta[*b*][1,4]benzodioxins. Some novel observations
Giovanni Fronza, Claudio Fuganti, Monica Mendozza, Roberta S. Rallo, Gianluca Ottolina and Daniel Joulain	4041	Stereochemistry of the double bond saturation in the formation in baker's yeast of 4-(4-hydroxyphenyl)-2-butanone (raspberry ketone)
Tushar K. Chakraborty and Khaja Azhar Hussain	4053	Synthesis of rapamycin–peptide hybrid molecule (RAP–P): high affinity FKBP12 ligand

Carlos Alvarez-Ibarra, Maria L. Quiroga and Emilio Toledano	4065	Synthesis of polysubstituted 3-thiofurans by regiospecific mono-*ipso*-substitution and *ortho*-metallation from 3,4-dibromofuran
Malcolm R. Banks, Alexander J. Blake, J. I. G. Cadogan, Allan A. Doyle, Ian Gosney, Philip K. G. Hodgson and Paul Thorburn	4079	Asymmetric Diels–Alder reactions employing modified camphor-derived oxazolidin-2-one chiral auxiliaries
Renzo Rossi, Fabio Bellina, Adriano Carpita and Felice Mazzarella	4095	Palladium-mediated cross-coupling reactions involving 3-substituted alkyl (*E*)-2,3-dibromopropenoates and arylzinc or aryltin derivatives
Pedro Bonete and Carmen Nájera	4111	Dilithiated 3-tosylpropanal dimethyl acetal as β,β-acylvinyl dianion or homoenolate dianion equivalent
Francisco Palacios, Domitila Aparicio and Jesus M. de los Santos	4123	An efficient and general strategy for the synthesis of 4-phosphorylated pyrazoles from β-hydrazono phosphine oxides
Keith Jones, Roger F. Newton and Christopher J. Yarnold	4133	Synthetic studies on the cevératrum alkaloid skeleton
Antonio Arcelli, Gianni Porzi and Sergio Sandri	4141	Unusual ammonolysis of a secondary amide assisted by unsubstituted vicinal amide group
	I	Instructions to Contributors

NUMBER 12

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
		TETRAHEDRON REPORT NUMBER 393
Andrew F. Parsons	4149	Recent developments in kainoid amino acid chemistry
		ARTICLES
Jean-Marc Chapuzet, Sophie Beauchemin, Benoit Daoust and Jean Lessard	4175	On the mechanism of alcoholysis of allylic and benzylic alcohols and of epoxides in the presence of ceric ammonium nitrate
Ned A. Porter, Randall L. Carter, Christopher L. Mero, Michael G. Roepel and Dennis P. Curran	4181	Penultimate group effects in free radical telomerizations of acrylamides
Ernesto Occhiato and J. Bryan Jones	4199	Probing enzyme stereospecificity. Inhibition of α-chymotrypsin and subtilisin Carlsberg by chiral amine- and aminoalcohol-derivatives
Dorothée Alfonso, Trina Colman-Saizarbitoria, Geng-Xian Zhao, Guoen Shi, Qing Ye, Jon T. Schwedler and Jerry L. McLaughlin	4215	Aromin and aromicin, two new bioactive annonaceous acetogenins, possessing an unusual bis-THF ring structure, from *Xylopia aromatica* (Annonaceae)
Manuka Ghosh and Marvin J. Miller	4225	Synthesis of a bicyclic oxamazin. A novel heteroatom activated β-lactam
John A. Zoltewicz, Michael P. Cruskie, Jr and Carlton D. Dill	4239	Use of pyridine *N*-oxide and pyridinium ion synthons in the preparation of oligopyridines. Two new unsymmetrical quaterpyridines with 2,2'-bipyridine units
David H. Williams and D. John Faulkner	4245	Two practical syntheses of an anti-inflammatory sesquiterpene furoic acid from *Sinularia* spp.
Tetsuaki Tanaka, Kimiya Maeda, Hidenori Mikamiyama, Yousuke Funakoshi, Kenji Uenaka and Chuzo Iwata	4257	Synthetic studies on aromadendrane-type compounds—III. Stereoselective total syntheses of (+)-aromadendrene and (−)-alloaromadendrene

Sadao Miki, Jun Ito, Ryuki Noda, Nariaki Nishijima and Koushi Fukunishi	4269	Synthesis of 1,2,3-tri-*t*-butyl-6,13- and 8,9,10-tri-*t*-butyl-5,14-pentacenequinones and their photochromic behaviors: new photochromic molecules
Hak-Fun Chow, Ida Yuk-Kit Chan, Chi Ching Mak and Man-Kit Ng	4277	Synthesis and properties of a new class of polyether dendritic fragments: useful building blocks for functional dendrimers
Shun-ya Onozawa, Toshiyasu Sakakura, Masato Tanaka and Motoo Shiro	4291	Lanthanoid-catalysed Tishchenko reaction of mono- or di-aldehydes
Makoto Kimura, Kazutaka Kobayashi, Yasushi Yamamoto and Yasuhiko Sawaki	4303	Electrooxidative pinacol-type rearrangement of β-hydroxy sulfides. Efficient C–S cleavage mediated by chloride ion oxidation
Atsuhiro Osuka, Yukihisa Wada and Satoshi Shinoda	4311	Covalently linked pyropheophorbide dimers as models of the special pair in the photosynthetic reaction center
Toru Kurome, Kaoru Inami, Tetsuya Inoue, Katsushige Ikai, Kazutoh Takesako, Ikunoshin Kato and Tetsuo Shiba	4327	Total synthesis of an antifungal cyclic depsipeptide aureobasidin A
Werner Kern and Gerhard Spiteller	4347	Synthesis and properties of natural occurring α-hydroxyaldehydes
Wladislaw Ivancev, Vassil I. Ognyanov and Manfred Hesse	4363	Synthesis of macrocyclic enaminolactams by ring expansion reaction of 2-oxocyclododecane-1-carbonitrile with diarylcarbodiimides
Jan Szymoniak, Didier Felix, Jack Besançon and Claude Moïse	4377	A simple and practical synthesis of 3,10-disubstituted β-pinene derivatives
Marie-Aimée Plancquaert, Martine Redon, Zdenek Janousek and Heinz G. Viehe	4383	2-Phenylthio-3,3,3-trifluoropropene, its sulfoxide and sulfone: synthesis and reactivity in 1,3-dipolar cycloadditions
Eryka Guibé-Jampel, Zbigniew Chalecki, Mohamed Bassir and Mirjana Gelo-Pujic	4397	Lipase catalyzed resolution of chiral acids or alcohols using mixed carboxylic–carbonic anhydrides
Guo-qiang Shi, Qian Wang and Manfred Schlosser	4403	Versatile 2-fluoroacrylic building blocks for the synthesis of fluorinated heterocyclic compounds
Wang-Qing Liu, François Carreaux, Hervé Meudal, Bernard P. Roques and Christiane Garbay-Jaureguiberry	4411	Synthesis of constrained 4-(phosphonomethyl)phenylalanine derivatives as hydrolytically stable analogs of *O*-phosphotyrosine
B. Kharraz, P. Uriac, S. Sinbandhit and L. Toupet	4423	Oxidation of 2,3- and 2,5-dihydro-1*H*-1-benzazepines by hydride transfer to an iminium ion: synthesis of 3*H*-1-benzazepines
Axel Couture, Eric Deniau, Pierre Grandclaudon and Patrice Woisel	4433	A new synthetic route to 2-alkyl-4-aryl-1(2*H*)-isoquinolones and 2-alkyl-4-aryl-1,2,3,4-tetrahydroisoquinolines
Tahar Douadi, Michel Cariou and Jacques Simonet	4449	Anodic oxidation of hexamethoxybiphenyls into either stable cation radical salt or spiro(fluorene-9,1'-cyclohexadienones)
J. S. Yadav and D. K. Barma	4457	Zinc mediated deoxygenation of 4-hydroxy-2-butenoic acid moiety. An application for the synthesis of multifunctional chiral synthon
Leon A. G. M. van den Broek	4467	1,3-Dipolar cycloaddition reactions of homochiral cyclic nitrones derived from 1-deoxynojirimycin
Sushil Raina and Vinod K. Singh	4479	Asymmetric synthesis of 5-hexadecanolide, pheromone of the queen of the Oriental hornet, *Vespa orientalis*
Jonathan Cobb, Ioannis N. Demetropoulos, Demetrios Korakas, Stavroula Skoulika and George Varvounis	4485	Synthesis and reactions of 1-aryl-2-nitropyrroles. Structural and conformational study of ethyl *N*-[2'-[1'-(2-nitropyrrolyl)]phenyl]-*N*-toluene-4-sulfonamide glycinate
Li-Gong Liu, Tong Zhang and Zhen-Su Li	4495	Regio- and stereo-selective hydrogenation of 17-substituted 13β-ethyl-11β-hydroxy-gona-4,9-dien-3-ones and NMR study
Teris A. van Beek and Peter P. Lankhorst	4505	Confirmation of the C-1 stereochemistry of ginkgolides by NMR

S. Baskaran, J. Vasu, Ram Prasad K. Kodukulla, Girish K. Trivedi and J. Chandrasekhar 4515 1,3-Dipolar cycloaddition reaction of α,β-unsaturated esters and lactones with diazomethane

I Instructions to Contributors

NUMBER 13

Contents

iii Contributors to this Issue

v Graphical Abstracts

TETRAHEDRON REPORT NUMBER 394

Pedro H. H. Hermkens, Harry C. J. Ottenheijm and David Rees 4527 Solid-phase organic reactions: a review of the recent literature

ARTICLES

Wayland E. Noland, Guang-Ming Xia, Kyle R. Gee, Michael J. Konkel, Mary J. Wahlstrom, John J. Condoluci and Dale L. Rieger 4555 *In situ* vinylindole synthesis. Diels–Alder reactions with maleic anhydride and maleic acid to give tetrahydrocarbazoles and carbazoles

Yukiko Doi, Masami Ishibashi and Jun'ichi Kobayashi 4573 Total synthesis of pseudodistomin C, a sphingosine-related piperidine alkaloid from tunicate *Pseudodistoma kanoko*

Birgit Bollbuck, Philip Kraft and Werner Tochtermann 4581 Nature-like odorants by stereoselective ring enlargement of cyclohexanone and cyclododecanone

S. Pedragosa-Moreau, A. Archelas and R. Furstoss 4593 Microbiological transformations—XXXII. Use of epoxide hydrolase mediated biohydrolysis as a way to enantiopure epoxides and vicinal diols: application to substituted styrene oxide derivatives

Moncef Bellassoued and Malika Salemkour 4607 Exclusive γ-regio functionalization of crotonaldehyde using γ-trimethylsilyl crotonaldimine. Application to the one pot synthesis of conjugated dienals

Frederic Alessi, Alain Doutheau, Daniel Anker, Guy Condemine and Janine Robert-Baudouy 4625 Synthesis of methyl esters of 3-deoxy-D-*erythro*-2-hexulosonic acid (KDG) analogs, inducers of the expression of pectinase genes in bacteria *Erwinia chrysanthemi*

Holger Keller and Manfred Schlosser 4637 2-(Trifluoromethyl)quinolines from anilines: a novel mode of isomerization and cyclization

Maurus Marty, Helen Stoeckli-Evans and Reinhard Neier 4645 Diastereoselective synthesis of (1*S*,2*S*,3*R*,6*S*) 3-chloro-3-methyl-6-isopropenyl-1,2-cyclohexanediol via Prins reaction induced by zinc and trimethylsilyl chloride

Catherine Caris, Paul Baret, Jean-Louis Pierre and Guy Serratrice 4659 Synthesis and NMR study of two lipophilic iron(III) sequestering agents based on 8-hydroxyquinoline; H-bonding and conformational changes

Yee-Hing Lai, Lin Ma and K. F. Mok 4673 12,13,25,26-Tetraaza-2,15-dithia[3.3]phenanthrolinophane. Synthesis, conformational study and complexation reactions

K. Mallik Yadav, Joghee R. Suresh, Balaram Patro, Hiriyakkanavar Ila and Hiriyakkanavar Junjappa 4679 Stepwise controlled reduction of α-oxoketene dithioacetals with Zn/$ZnCl_2$–TMEDA in ethanol

David StC. Black, Michael C. Bowyer, Andrew J. Ivory, Katrina A. Jolliffe and Naresh Kumar 4687 Synthesis of 7-indolyl-imines by the reaction of 4,6-dimethoxyindoles with secondary amides and phosphoryl chloride

David StC. Black, Andrew J. Ivory and Naresh Kumar 4697 Synthesis of biindolyls by the reaction of indoles with indolin-2-ones and phosphoryl chloride or trifluoromethanesulfonic anhydride

E. J. P. Malar 4709 SINDO1 investigations on the low-lying states of some three-membered antiaromatic systems

Achille Barco, Simonetta Benetti, Carmela De Risi, Gian P. Pollini, Giampiero Spalluto and Vinicio Zanirato 4719 4-Isopropyl-2-oxazolin-5-one anion as masked umpoled synthon for both formyl and hydroxycarbonyl anions: generation, reactivity and synthetic applications

Peter J. Scammells, Stephen P. Baker, Luiz Bellardinelli, Ray A. Olsson, Richard A. Russell and Denis M. J. Wright	4735	The synthesis of the novel adenosine agonists, *exo*- and *endo*-N^6-(5,6-epoxynorborn-2-yl)adenosine
James M. Lovell, Roy L. Beddoes and John A. Joule	4745	Synthesis of 4,6-disubstituted thianthrenes; X-ray crystal structures of 4,6-diphenylthianthrene and 1-tetrathiafulvalenylnaphthalene
Francisco Sarabia-García and F. Jorge López-Herrera	4757	Studies on the synthesis of tunicamycin. The preparation of 7-deoxy-2-deamino-6-hydroxy tunicamine and related products
Martin C. Clasby, Donald Craig, Albert A. Jaxa-Chamiec, Justine Y. Q. Lai, Andrew Marsh, Alexandra M. Z. Slawin, Andrew J. P. White and David J. Williams	4769	Vitamin D_3 synthetic studies. Intramolecular Diels–Alder approaches to the CD-ring fragment
Bianca F. Bonini, Mauro Comes-Franchini, Mariafrancesca Fochi, Germana Mazzanti and Alfredo Ricci	4803	Chemistry of silyl thioketones—IX. A new selective synthesis of 1-silyl-1-enethiols and of 2-silyl-thiacycloalk-2-enes of common to large ring size
Alfonso Fernández-Mateos, Gustavo Pascual Coca, Rosa Rubio González and Carolina Tapia Hernández	4817	Model insect antifeedants. Synthesis of azadiradione fragments through acyl radicals cyclizations and stannane coupling reactions
Pietro Spanu, Gloria Rassu, Fausta Ulgheri, Franca Zanardi, Lucia Battistini and Giovanni Casiraghi	4829	Divergent synthesis of 3-amino-3-deoxy- and 4-amino-4-deoxyhexoses
Alberto Avenoza, Carlos Cativiela, Miguel París and Jesús M. Peregrina	4839	The use of 1-amino-2-phenyl-1-cyclohexanecarboxylic acids as chiral auxiliaries in asymmetric Diels–Alder reactions
Clara Baldoli, Paola Del Buttero, Emanuela Licandro, Antonio Papagni and Tullio Pilati	4849	Tricarbonyl(η^6arene)chromium(0) complexes as chiral auxiliaries: asymmetric synthesis of β-aminoesters and β-lactams by Reformatsky condensation
Francisco Palacios, Domitila Aparicio and Jesús M. de los Santos	4857	Reaction of *N*-vinylic phosphazenes with carbonyl compounds. Reactivity of the vinyl side chain versus aza-Wittig reaction
Cynthia Ebert, Lucia Gardossi, Paolo Linda, Regina Vesnaver and Marco Bosco	4867	Influence of organic solvents on enzyme chemoselectivity and their role in enzyme–substrate interaction
Kandasamy Sakthivel and Tanmaya Pathak	4877	One-pot deoxygenative conversion of a ribonucleoside to enaminonucleosides involving 1,2-hydride shift rearrangement
Hervé Corlay, William B. Motherwell, Andrew M. K. Pennell, Michael Shipman, Alexandra M. Z. Slawin, David J. Williams, Paul Binger and Michael Stepp	4883	Stereochemical aspects of intramolecular palladium catalysed [3 + 2] cycloadditions of methylenecyclopropanes
José L. López-Pérez, Esther del Olmo, Beatriz de Pascual-Teresa, Marta Merino and Arturo San Feliciano	4903	The stereochemistry of thuriferic and epithuriferic acids
Pablo Gaviña, Natividad López Lavernia, Ramón Mestres and Miguel A. Miranda	4911	Deacetalization by photoinduced electron transfer with a pyrylium salt: effect of limiting the amounts of water, oxygen and sensitizer
M. C. de la Fuente, Luis Castedo and Domingo Domínguez	4917	Total synthesis of (±)-*O*-methylclavizepine
	I	Instructions to Contributors

NUMBER 14

Contents

TETRAHEDRON SYMPOSIA-IN-PRINT NUMBER 60

FULLERENE CHEMISTRY

Guest Editor: AMOS B. SMITH, III

University of Pennsylvania, Philadelphia, Pennsylvania, USA

	iii	Contributors to this Issue
	vii	Announcement: Tetrahedron Symposia-in-Print
	xiii	Preface
	xv	Graphical Abstracts
Peter Timmerman, Harry L. Anderson, Rüdiger Faust, Jean-François Nierengarten, Tilo Habicher, Paul Seiler and François Diederich	4925	Fullerene–acetylene hybrids: towards a novel class of molecular carbon allotropes
J. Osterodt, A. Zett and F. Vögtle	4949	Fullerenes by pyrolysis of hydrocarbons and synthesis of isomeric methanofullerenes
Long Y. Chiang, J. B. Bhonsle, Leeyih Wang, S. F. Shu, T. M. Chang and Jih Ru Hwu	4963	Efficient one-flask synthesis of water-soluble [60]fullerenols
Toshiyasu Suzuki, Koichi Kikuchi, Fumihiro Oguri, Yasuhiko Nakao, Shinzo Suzuki, Yohji Achiba, Kazunori Yamamoto, Hideyuki Funasaka and Takeshi Takahashi	4973	Electrochemical properties of fullerenolanthanides
Masatomi Ohno, Toshihiro Azuma, Satoshi Kojima, Yuri Shirakawa and Shoji Eguchi	4983	An efficient functionalization of [60]fullerene. Diels–Alder reaction using 1,3-butadienes substituted with electron-withdrawing and electron-donating (silyloxy) groups
Takahiro Kusukawa, Akihiko Shike and Wataru Ando	4995	Photochemical functionalization of C_{60} with cyclosilanes and cyclogermane
Andreas Gügel, Pavel Belik, Michael Walter, Alexander Kraus, Eva Harth, Manfred Wagner, Jochen Spickermann and Klaus Müllen	5007	The repetitive Diels–Alder reaction: a new approach to [60]fullerene main-chain polymers
Takeshi Akasaka, Tatsuhisa Kato, Shigeru Nagase, Kaoru Kobayashi, Kazunori Yamamoto, Hideyuki Funasaka and Takeshi Takahashi	5015	Chemical derivatization of endohedral metallofullerene La@C_{82} with digermirane
Alan L. Balch, Arwa S. Ginwalla, Marilyn M. Olmstead and Regine Herbst-Irmer	5021	Structural analysis of products from the C_{60}–piperazine reaction. Consistent geometric distortions of the fullerene core upon adduct formation
Bernhard Kräutler and Josef Maynollo	5033	Diels–Alder reactions of the [60]fullerene: functionalizing a carbon sphere with flexibly and with rigidly bound addends

Mark S. Meier and Magdalena Poplawska	5043	The addition of nitrile oxides to C_{60}
Hideo Nagashima, Masayuki Saito, Yoshiyuki Kato, Hitoshi Goto, Eiji Osawa, Masaaki Haga and Kenji Itoh	5053	Electronic structures and redox properties of silylmethylated C_{60}
I. Lamparth, A. Herzog and A. Hirsch	5065	Synthesis of [60]fullerene derivatives with an octahedral addition pattern
Yasujiro Murata, Kiyoto Motoyama, Koichi Komatsu and Terence S. M. Wan	5077	Synthesis, properties, and reactions of a stable carbanion derived from alkynyldihydrofullerene: 1-octynyl-C_{60} carbanion
Shigeru Yamago, Masao Yanagawa, Hideyuki Mukai and Eiichi Nakamura	5091	Tertiary phosphines, P-chiral phosphinites and phosphonic acid esters bearing fullerene substituent. Metal complexes and redox properties
Takayuki Ishida, Koji Shinozuka, Takashi Nogami, Masayuki Kubota and Mamoru Ohashi	5103	Synthesis and characterization of C_{60} derivatives possessing TEMPO radicals
Chad A. Mirkin and W. Brett Caldwell	5113	Thin film, fullerene-based materials
Stephen R. Wilson, Qingyi Lu, Jingrong Cao, Yunhui Wu, Christopher J. Welch and David I. Schuster	5131	Chiral non-racemic C_{60} derivatives: a proposed sector rule for fullerene absolute configuration
R. Shimshi, A. Khong, H. A. Jiménez-Vázquez, R. J. Cross and M. Saunders	5143	Release of noble gas atoms from inside fullerenes
Majid Keshavarz-K., Brian Knight, Robert C. Haddon and Fred Wudl	5149	Linear free energy relation of methanofullerene C_{61}-substituents with cyclic voltammetry: strong electron withdrawal anomaly
Christopher J. Pope and Jack B. Howard	5161	Thermodynamic limitations for fullerene formation in flames
Yi-Zhong An, Chi-Hong B. Chen, Jamey L. Anderson, David S. Sigman, Christopher S. Foote and Yves Rubin	5179	Sequence-specific modification of guanosine in DNA by a C_{60}-linked deoxyoligonucleotide: evidence for a non-singlet oxygen mechanism
J. Wang, G. Javahery, V. Baranov and D. K. Bohme	5191	Reactions of $C_{60}^{\cdot+}$, C_{60}^{2+} and $C_{60}^{\cdot3+}$ with C_2H_2 and C_2H_4 in the gas phase: polymerization initiated by $C_{60}^{\cdot3+}$
R. C. Haddon and K. Raghavachari	5207	Electronic structure of the fulleroids: homoconjugation in bridged C_{60} derivatives
Maurizio Prato, Michele Maggini, Cristina Giacometti, Gianfranco Scorrano, Giancarlo Sandonà and Giuseppe Farnia	5221	Synthesis and electrochemical properties of substituted fulleropyrrolidines
Anthony G. Avent, Paul R. Birkett, Adam D. Darwish, Harold W. Kroto, Roger Taylor and David R. M. Walton	5235	Formation of $C_{70}Ph_{10}$ and $C_{70}Ph_8$ from the electrophile $C_{70}Cl_{10}$
Paul A. Cahill and Celeste M. Rohlfing	5247	Theoretical studies of derivatized buckyballs and buckytubes
Amos B. Smith, III and Hidetoshi Tokuyama	5257	Nitrene additions to [60]fullerene do not generate [6,5] aziridines
	I	Instructions to Contributors

NUMBER 15

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
		TETRAHEDRON REPORT NUMBER 395
Benjamin W. Gung	5263	Diastereofacial selection in nucleophilic additions to unsymmetrically substituted trigonal carbons
		ARTICLES
Seunguk Paik and Emil H. White	5303	α-Aminosulfonopeptides as possible functional analogs of penicillin; evidence for their extreme instability
Darren L. Holmes and David A. Lightner	5319	Synthesis and acidity constants of $^{13}CO_2H$-labelled dicarboxylic acids. pK_as from ^{13}C NMR
Martha S. Morales-Ríos, María A. Bucio and Pedro Joseph-Nathan	5339	Formal synthesis of (±)-physostigmine
Ravindra K. Pandey, Nadine Jagerovic, Joseph M. Ryan, Thomas J. Dougherty and Kevin M. Smith	5349	Syntheses and preliminary *in vivo* photodynamic efficacy of benzoporphyrin derivatives from phylloerythrin and rhodoporphyrin XV methyl esters and aspartyl amides
Rahul Jain and Louis A. Cohen	5363	Regiospecific alkylation of histidine and histamine at N-1 (τ)
Antonio M. Montanari, William Fenical, Niels Lindquist, Angela Y. Lee and Jon Clardy	5371	Volutamides A–E, halogenated alkaloids with antifeedant properties from the Atlantic bryozoan *Amathia convoluta*
David H. Williams and D. John Faulkner	5381	*N*-Methylated ageliferins from the sponge *Astrosclera willeyana* from Pohnpei
Jun'ichi Kobayashi, Hirokazu Hosoyama, Takie Katsui, Naotoshi Yoshida and Hideyuki Shigemori	5391	Taxuspines N, O and P, new taxoids from Japanese yew *Taxus cuspidata*
Masamichi Kinoshita and Atsuyoshi Ohno	5397	Factors influencing enantioselectivity of lipase-catalyzed hydrolysis
Johannes Averdung and Jochen Mattay	5407	Exohedral functionalization of [60]fullerene by [3 + 2] cycloadditions: syntheses and chemical properties of triazolino-[60]fullerenes and 1,2-(3,4-dihydro-2*H*-pyrrolo)-[60]fullerenes
Gregorio Torres-García and Jochen Mattay	5421	Exohedral functionalization of [60]fullerene by [4 + 2] cycloadditions. Diels–Alder reactions of [60]fullerene with electron rich 2,3-dioxy-substituted-1,3-butadienes
G. Kollenz, G. Penn, R. Theuer, W. M. F. Fabian, H. A. Abd El-Nabi, Xiong Zhang, K. Peters, E.-M. Peters and H. G. von Schnering	5427	Reactions of cyclic oxalyl compounds—XXXVIII. New isoindigoide dyes from heterocyclic 2,3-diones—synthesis and thermal rearrangement
Hermann K. Hombrecher, Stefan Ohm and Daniela Koll	5441	Synthesis of galactopyranosyl substituted porphyrins
Gregor Tewes, Andreas Hirschfelder and Peter Eilbracht	5449	Stereoselective synthesis of 2-*exo*-functionalized bicyclo[3.2.1]oct-3-en-8-ones by iron mediated carbonylation of bicyclo[4.1.0]hept-2-enes
Dirk P. Dygutsch and Peter Eilbracht	5461	Synthesis of cyclopentanone derivatives with polystyrene-supported cyclopentadienyl rhodium catalysts
Andreas Sattler and Günter Haufe	5469	A facile two-step synthesis of (ω-1)-fluoroalkan-ω-olides: influence of a vicinal fluorine substituent in nucleophilic substitutions
Peter Laackmann and Willy Friedrichsen	5475	Bis-(pyrimidiniumolates)

Waldemar Adam and Marion N. Korb	5487	Diastereoselective oxidation of lithium and chlorotitanocene enolates derived from camphor
Olivier Lavastre, Laurence Ollivier, Pierre H. Dixneuf and Sourisak Sibandhit	5495	Sequential catalytic synthesis of rod-like conjugated poly-ynes
D. Stuerga and P. Gaillard	5505	Microwave heating as a new way to induce localized enhancements of reaction rate. Non-isothermal and heterogeneous kinetics
Sylvie Dérien, Dominique Jan and Pierre H. Dixneuf	5511	Ruthenium-catalysed coupling of allyl alcohol with alkynes: a new route to γ,δ-unsaturated acetals and aldehydes
Frédéric Werner, Gilles Parmentier, Bang Luu and Laurence Dinan	5525	A convenient stereoselective synthesis of castasterone and its analogues using arsenic ylides
Mariella Mella, Mauro Freccero and Angelo Albini	5533	The photochemical approach to the functionalization of open-chain and cyclic alkanes—I. Single electron transfer oxidation
Mariella Mella, Mauro Freccero and Angelo Albini	5549	The photochemical approach to the functionalization of open-chain and cyclic alkanes—II. Hydrogen abstraction
Nafizal Hossain, Norbert Blaton, Oswald Peeters, Jef Rozenski and Piet A. Herdewijn	5563	Synthesis of homo-N-nucleosides, a series of C1' branched-chain nucleosides
V. Srirajan, Vedavati G. Puranik, A. R. A. S. Deshmukh and Baburao M. Bhawal	5579	An efficient use of Oppolzer sultam for diastereospecific synthesis of *cis*-β-lactams
V. Srirajan, A. R. A. S. Deshmukh and B. M. Bhawal	5585	An efficient synthesis of *cis*-3-hydroxy-4-phenyl-β-lactams: precursor for taxol side chain
Jacqueline Marchand-Brynaert, Michèle Bouchet, Roland Touillaux, Cécile Beauve and Jacques Fastrez	5591	Design and synthesis of a bifunctional label for selection of β-lactamase displayed on filamentous bacteriophage by catalytic activity
Pejakala K. Vasudeva and Madhavarao Nagarajan	5607	Ring opening reactions of benzyl 2,3-anhydro-α-D-ribopyranoside with nucleophiles
Joel P. Mackay, Cathryn J. Shelton and Margaret M. Harding	5617	Assignment of the ^{1}H NMR spectrum and solution conformation of the antitumour antibiotic ditrisarubicin B
Geir Langli, Lise-Lotte Gundersen and Frode Rise	5625	Regiochemistry in Stille couplings of 2,6-dihalopurines
Anthony J. Bellamy and P. Nick Hudson	5639	Chloro- and bromo-demethoxylation of methoxypolynitroaryl systems
	I	Instructions to Contributors

NUMBER 16

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
		TETRAHEDRON REPORT NUMBER 396
Chao-Jun Li	5643	Aqueous Barbier–Grignard type reaction: scope, mechanism, and synthetic applications
		ARTICLES
Scott McN. Sieburth, Joseph J. Somers and Heather K. O'Hare	5669	α-Alkyl-α-aminosilanes—I. Metalation and alkylation between silicon and nitrogen
Scott McN. Sieburth and Joseph J. Somers	5683	α-Alkyl-α-aminosilanes—II. A ^{2}H NMR study of organolithium stabilization by silicon and by phenyl in solution

Eugene P. Mazzola, Saleh A. Turujman, Sandra J. Bell, Julie N. Barrows, John E. Bailey, Jr, Ely G. Mouchahoir, Steven Prescott, Mark D. Archer, Mark Oliver, William F. Reynolds and Kathy W. Nielsen	5691	Nuclear magnetic resonance investigations of azo–hydrazone, acid–base equilibria of FD&C Yellow No. 6
Fillmore Freeman, Jeong Doo Kim, Mark Yun Lee and Xiaojing Wang	5699	Rearrangement of bis[(2,4,6-trimethylphenyl)methanoyl]bicyclo[2.2.1]hept-5-enes to 2-oxabicyclo[3.3.0]octa-3,7-dienes
Michael C. Pirrung and David S. Nunn	5707	Photochemical rearrangements of quinone monoketals
Michael L. Miller and Partha S. Ray	5739	An intramolecular 1,3-dipolar cycloaddition approach to a pyrimidoazepinone derivative. A potentially useful intermediate towards the synthesis of pyrimidoazepine based folic acid derivatives
Jun'ichi Kobayashi, Kyoko Yuasa, Takayuki Kobayashi, Takuma Sasaki and Masashi Tsuda	5745	Jaspiferals A–G, new cytotoxic isomalabaricane-type nortriterpenoids from Okinawan marine sponge *Jaspis stellifera*
Masaki Yamada, Kazuya Nakao, Toshio Fukui and Ken-ichi Nunami	5751	(*Z*)-Selective β-bromination of *N*-formyl-α,β-dehydroamino acid esters
Kohei Tamao, Atsushi Kawachi, Yoko Tanaka, Hitoshi Ohtani and Yoshihiko Ito	5765	Synthetic applications of functionalized silyl anions: aminosilyl anions as hydroxy anion equivalent
R. Kluge, M. Schulz and S. Liebsch	5773	Sulfonic peracids—III. Heteroatom oxidation and chemoselectivity
Thomas Schanding, Pia D. Vogel, Wolfgang E. Trommer and John G. Wise	5783	Synthesis of a pH-sensitive spin-labeled cyclohexylcarbodiimide derivative for probing protonation reactions in proton-pumping enzymes
Yang Ye, Ingrid Josten, Norbert Arnold, Bert Steffan and Wolfgang Steglich	5793	Isolation of a fluorone pigment from the Indian paint fungus *Echinodontium tinctorium* and *Pyrofomes albomarginatus*
Waldemar Adam and Alexander K. Smerz	5799	Nickel-catalyzed hydroxylation of 1,3-dicarbonyl compounds by dimethyldioxirane
Dieter Enders and Monika Knopp	5805	Novel asymmetric syntheses of (–)-malyngolide and (+)-*epi*-malyngolide
Sandrine Jolivet, Loïc Toupet, Francoise Texier-Boullet and Jack Hamelin	5819	Unusual and stereoselective ring closure of unsaturated monohydrazones with β-ketoesters in a solvent-free reaction
Pedro Molina, Julián Alcántara and Carmen López-Leonardo	5833	Regiospecific preparation of γ-carbolines and pyrimido[3,4-*a*]indole derivatives by intramolecular ring-closure of heterocumulene-substituted indoles
Justo Cobo, Manuel Melguizo, Adolfo Sánchez, Manuel Nogueras and Erik De Clercq	5845	A new method for the synthesis of 2-glycosylaminopyridines
Andrey A. Fokin, Pavel A. Gunchenko, Natalya I. Kulik, Svetlana V. Iksanova, Pavel A. Krasutsky, Igor' V. Gogoman and Alexander G. Yurchenko	5857	NO_2^+-Containing reagents in the electrophilic and oxidative addition to propellanic C–C bond
Pelayo Camps, Rachid El Achab, Mercè Font-Bardia, Diana Görbig, Jordi Morral, Diego Muñoz-Torrero, Xavier Solans and Montserrat Simon	5867	Easy synthesis of 7-alkylbicyclo[3.3.1]non-6-en-3-ones by silica gel-promoted fragmentation of 3-alkyl-2-oxaadamant-1-yl mesylates
Carlos Cativiela, Maria D. Diaz-de-Villegas and Ana I. Jiménez	5881	Wittig olefination of methyl (1*S*,2*R*)-1-benzamido-2-formylcyclopropanecarboxylate. A powerful tool for the synthesis of new conformationally constrained cyclopropyl amino acids
Carlo Dell'Erba, Marino Novi, Giovanni Petrillo and Cinzia Tavani	5889	Electrophilic α-*p*-tolylhydrazonylation of *tert*-butyl alkanoates and tertiary alkanamides with *tert*-butyl *p*-tolylazo sulfide
Mercedes Cueto and José Darias	5899	Uncommon tetrahydrofuran monoterpenes from Antarctic *Pantoneura plocamioides*
Guo-Qiang Lin and Wei-Chu Xu	5907	A convergent and stereoselective synthesis of the sex pheromone of *Macrocentrus grandii*

David E. Fenton and George Papageorgiou	5913	Synthesis of unsymmetrical dinucleating ligands bearing nitrogen and oxygen donor atoms
Alberto García, Luis Castedo and Domingo Domínguez	5929	Revision of the structures of linaresine and dihydrolinaresine
Mª del Mar Blanco, Miguel Ángel Alonso, Carmen Avendaño and J. Carlos Menéndez	5933	New findings in hetero Diels–Alder reactions of quinolinetriones
Nynke M. Spijker, Cor A. Keuning, Mariska Hooglugt, Gerrit H. Veeneman and Constant A. A. van Boeckel	5945	Synthesis of a hexasaccharide corresponding to a porcine zona pellucida fragment that inhibits porcine sperm–oocyte interaction *in vitro*
Takatoshi Matsumoto, Takayuki Shioiri and Eiji Osawa	5961	Computational studies of effective asymmetric alkylation utilizing a chiral Schiff base derived from 2-hydroxy-3-pinanone—I
Takatoshi Matsumoto, Takayuki Shioiri and Eiji Osawa	5971	Computational studies of effective asymmetric alkylation utilizing a chiral Schiff base derived from 2-hydroxy-3-pinanone—II
Rikki P. Alexander, Robert W. Bates, Andrew J. Pratt and James A. E. Kraunsoe	5983	An *N*-nitrosochloroethyl-cephalosporin carbamate prodrug for antibody-directed enzyme prodrug therapy (ADEPT)
Vanda Cerè, Salvatore Pollicino and Antonino Fava	5989	Formation of cyclic sulfonium salts by Me_3Sil-promoted intramolecular displacement of hydroxide or methoxide by sulfide. Ring contraction thiepane → thiolane
Florencio Zaragoza and Susanne Vejle Petersen	5999	Generation of rhodium carbenoids on a polystyrene support and their OH-insertion reaction with alcohols
Catharina M. Saunders, Susanna L. Bonnet, Jan P. Steynberg and Daneel Ferreira	6003	Oligomeric flavanoids—XXIV. Controlled biomimetic synthesis of profisetinidin triflavanoid related phlobatannins
Arturo Arduini, Leonardo Mirone, Daniela Paganuzzi, Alessandra Pinalli, Andrea Pochini, Andrea Secchi and Rocco Ungaro	6011	New calix[4]arenes having electron donating groups at the upper rim as molecular platforms and host molecules
Bartłomiej Furman, Zbigniew Kałuza and Marek Chmielewski	6019	Stereochemical course of [2 + 2]cycloaddition of chlorosulfonyl isocyanate to *cis* and *trans* 3-*O*-but-1'-enyl-1,2-*O*-isopropylidene-α-D-xylofuranose
	I	Instructions to Contributors

NUMBER 17

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
		TETRAHEDRON REPORT NUMBER 397
Howard L. Mansell	6025	Synthetic approaches to anatoxin-*a*
		ARTICLES
Alan P. Marchand, Yanjun Wang, Chien-tai Ren, Vuligonda Vidyasagar and Dongqing Wang	6063	On the mechanism of acid promoted ring opening of a pentacyclo-[5.4.0.$0^{2,6}$.$0^{3,10}$.$0^{5,9}$]undecane-spiroannulated oxetane
Barry B. Snider and Eugenia Y. Kiselgof	6073	Mn(III)-based oxidative free radical cyclizations of unsaturated 2-cyclohexenones and aldehydes
Derrick L. J. Clive, Xianglong Kong and Christine Chua Paul	6085	Further model studies related to fredericamycin A: analogues in which ring C is expanded to six atoms, and an examination of the diastereoselectivity of radical spirocyclization
Alirica I. Suarez, Jing Lin and Charles M. Thompson	6117	Synthesis and pK_a evaluation of model phosphonamidic, phosphonamidothioic and phosphonamidodithioic acids

Hisanori Senboku, Megumi Takashima, Masayoshi Suzuki, Kazuhiro Kobayashi and Hiroshi Suginome	6125	Photoinduced molecular transformations—CLIX. Formation of some furonaphthyridinones by selective β-scission of cyclobutanoxyl radicals generated from [2 + 2] photoadducts of 4-hydroxy-1-phenyl[1,8]naphthyridin-2(1*H*)-one with alkenes
Takashi Kitayama	6139	Asymmetric syntheses of pheromones for *Bactrocera nigrotibialis*, *Andrena wilkella*, and *Andrena haemorrhoa* F from a chiral nitro alcohol
Adalbert Maercker, Hans Wunderlich and Ulrich Girreser	6149	Polylithiumorganic compounds—XXIII. 3,4-Dilithio-1,2-butadienes by addition of lithium metal to 1,4-unsymmetrically substituted butatrienes
Florine Cavelier, Robert Jacquier, Jean-Luc Mercadier and Jean Verducci	6173	Destruxin analogues: depsi peptidic bond replacement by amide bond
Gaëlle Foulard, Thierry Brigaud and Charles Portella	6187	Sequential radical perfluoroalkylation–nucleophilic cyclization. Synthesis of 2-perfluoroalkylideneméthyl and 2-perfluoroalkylméthyl-1,4-dioxanes from 1-*O*-allyl-1,2-diols
Théophile Tschamber, Charles J. Craig, Marc Muller and Jacques Streith	6201	Stereoselective synthesis of D,L-erythrose- and of D,L-1,4-dideoxy-4-aminoerythrose derivatives bearing a β-lactam at C-4
Siméon Arseniyadis, Dmitry V. Yashunsky, Manuel Muñoz Dorado, Rosemeire Brondi Alves, Qian Wang, Pierre Potier and Loïc Toupet	6215	A chemoenzymatic approach to the taxoid BC-substructure
L. Beyer, J. J. Criado, E. García, F. Leßmann, M. Medarde, R. Richter and E. Rodriguez	6233	Synthesis and characterization of thiourea derivatives of α-aminoacids. Crystal structure of methyl L-valinate and L-leucinate derivatives
Giovanni Desimoni, Giuseppe Faita, Stefano Garau and PierPaolo Righetti	6241	Solvent effect in pericyclic reactions—X. The cheletropic reaction
	I	Instructions to Contributors

NUMBER 18

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
	6249	Corrigendum
		TETRAHEDRON REPORT NUMBER 398
Scott McN. Sieburth and Nicholas T. Cunard	6251	The [4 + 4] cycloaddition and its strategic application in natural product synthesis
		ARTICLES
Philip Magnus, Rich Carter, Martin Davies, Jason Elliott and Thomas Pitterna	6283	Studies on the synthesis of the core structures of the antitumor agents neocarzinostatin, kedarcidin, C-1027 and maduropeptin
Thomas Money and Michael K. C. Wong	6307	A formal, enantiospecific synthesis of pseudoguaianolides
Teh-Chang Chou, Pao-Chiung Hong, Yane-Fong Wu, Wen-Yean Chang, Cheng-Tung Lin and Kuan-Jiuh Lin	6325	Diels–Alder reactions of a cage-annulated cyclohexa-1,3-diene. Synthesis and crystal structure of a doubly-caged sterically-congested tetraol
Motoo Tori, Katsuyuki Nakashima, Tomoko Takeda, Yukiko Kan, Shigeru Takaoka and Yoshinori Asakawa	6339	Novel sesquiterpenoids from the Colombian liverwort *Porella swartziana*
Jun'ichi Kobayashi, Takemichi Nakamura and Masashi Tsuda	6355	Hymenamide F, new cyclic heptapeptide from marine sponge *Hymeniacidon* sp.

Bin Ye, Hideshi Nakamura and Akio Murai	6361	Total synthesis of (±)-halipanicine
Sioavosh Mahboobi, Sabine Kuhr and Markus Koller	6373	Synthesis of carbazole derivatives—III. Synthesis of new pyrrolidino[3,4-*c*]carbazoles by intramolecular Michael addition
René Csuk and Yvonne von Scholz	6383	Enantiomerically pure cyclopropanoid nucleoside analogues: synthesis and analysis
René Csuk, Martina Schaade and Claus Krieger	6397	Synthesis of *C*-glycosides from glycals or vinylogous lactones and trimethylsilyl ketene acetals
Claus Herdeis, Walter A. Held, Armin Kirfel and Franz Schwabenländer	6409	Diastereoselective synthesis of (2*S*,5*S*)- and (2*R*,5*S*)-5-hydroxyhomopipecolic acid from *S*-glutamic acid. An entry to streptolutine stereoisomers
Antonino Corsaro, Giancarlo Perrini, Venerando Pistarà, Paolo Quadrelli, Anna Gamba Invernizzi and Pierluigi Caramella	6421	Cycloaddition of benzonitrile oxide to pyridazine, pyrimidine and pyrazine
Subramanian Baskaran, Mirza Hamed A. Baig, Sharmila Banerjee, Chitra Baskaran, Kanchinadham Bhanu, Sonali P. Deshpande and Girish K. Trivedi	6437	An efficient and stereoselective synthesis of (2*R*,2'*S*)-1-*O*-(2'-hydroxyhexadecyl)glycerol and its oxo analogs: potential antitumour compounds from shark liver oil
	I	Instructions to Contributors

NUMBER 19

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
		TETRAHEDRON REPORT NUMBER 399
Janet Wisniewski Grissom, Gamini U. Gunawardena, Detlef Klingberg and Dahai Huang	6453	The chemistry of enediynes, enyne allenes and related compounds
		ARTICLES
Ronald C. Bernotas, Ginette Adams and Albert A. Carr	6519	Synthesis of benzazepine-based nitrones as radical traps
Naoyoshi Maezaki, Motohiro Soejima, Miwako Takeda, Atsunobu Sakamoto, Yûki Matsumori, Tetsuaki Tanaka and Chuzo Iwata	6527	Novel asymmetric desymmetrization of *meso*-1,2-diols via diastereoselective β-elimination of chiral α-arylsulfinyl acetals
Chisato Mukai, Syuichi Hirai, In Jong Kim, Masaru Kido and Miyoji Hanaoka	6547	Studies on total syntheses of antitumor styryllactones: stereoselective total syntheses of (+)-goniofufurone, (+)-goniobutenolide A, and (−)-goniobutenolide B
Shoei-Sheng Lee, Chien-Kuang Chen and Chung-Hsiung Chen	6561	Chemical constituents from *Dehaasia triandra*—II. Five new alkaloids, secoxanthoplanine, dehydroisocorydione, 11,8'-*O*-bisisocorydine, (8,8'-*R*)- and (8,8'-*S*)-bisisocorydine, isolated from the leaves
Kazuhiro Nagata, Takashi Itoh, Mamiko Okada and Akio Ohsawa	6569	The reaction of benzimidazolium derivatives with superoxide
Michihiko Noguchi, Hiroshi Okada, Masanori Watanabe, Kumi Okuda and Osamu Nakamura	6581	Iodocyclization of 3-alkynyl- and 3-allenyl-2-(substituted amino)-1-imidazolin-4-ones
Jürgen Wagner, Huong L. Pham and Werner Döpke	6591	Alkaloids from *Hippeastrum equestre* Herb.—V. Circular dichroism studies

Martin Veith, Konrad Dettner and Wilhelm Boland	6601	Stereochemistry of an alcohol oxidase from the defensive secretion of larvae of the leaf beetle *Phaedon armoraciae* (Coleoptera: Chrysomelidae)
Valérie Fargeas, Patrick Le Ménez, Isabelle Berque, Janick Ardisson and Ange Pancrazi	6613	Studies in cuprate rearrangement and stannylcupration: application to the stereo- and enantiospecific synthesis of a stannyldiene C_{10}–C_{15} fragment of des-epoxy-rosaramycin
Sylvie Gueugnot, Mouâd Alami, Gérard Linstrumelle, Lengo Mambu, Yves Petit and Marc Larchevêque	6635	An efficient total synthesis of 5-(*S*)-HETE
Philippe Compain, Jacques Goré and Jean-Michel Vatèle	6647	Rearrangement of α-hydroxy imines to α-amino ketones: mechanistic aspects and synthetic applications
Didier Collomb, Christian Deshayes and Alain Doutheau	6665	Synthesis of functionalized phenolic derivatives via the benzannulation of dienylketenes formed by a thermal Wolff rearrangement of α-diazo-β-keto compounds
Honoré Monti, Gérard Audran, Michel Feraud, Jean-Pierre Monti and Gilbert Léandri	6685	Chemo- and regioselectivity in the Lewis acid-induced reaction of sterically unhindered isocyclic allylsilanes with 3-butyn-2-one
Pierre Ducrot, Robert Bucourt, Claude Thal, Bernard Marçot, Joëlle Mayrargue and Henri Moskowitz	6699	Conformational analysis of stereoselective epoxidations in flexible systems
André Loupy, Philippe Pigeon and Mohamed Ramdani	6705	Synthesis of long chain aromatic esters in a solvent-free procedure under microwaves
Béla Ágai, Valéria Németh, Zsolt Böcskei, Kálmán Simon, István Bitter and László Toke	6713	Synthesis of dibenzo-monoazacrown ethers
Elisabeth Cheng, Jens Botzem, Martin J. Wanner, Brigitte E. A. Burm and Gerrit-Jan Koomen	6725	Enzyme catalysed oxidation of nazlinin and nazlinin derivatives. Characterisation of the reaction products
Nadine Jagerovic, José Elguero and Jean-Louis Aubagnac	6733	Reaction of 2-azidobenzothiazole and 1-azido-4-(3',5'-dimethyl-1'-pyrazolyl)tetrafluorobenzene with [60]fullerene and characterization of the adducts by fast-atom bombardment mass spectrometry
Karen Goodall and Andrew F. Parsons	6739	A radical cyclisation approach to pyroglutamates
Raffaele Saladino, Enrico Mincione, Claudia Crestini and Maurizio Mezzetti	6759	Transformations of thiopyrimidine and thiopurine nucleosides following oxidation with dimethyldioxirane
Salomé Rodríguez-Morgade, Purificación Vázquez and Tomás Torres	6781	Synthetic applications of functionalized phosphoranylideneamino-1,4-benzoquinones: preparation of oxazolo[5,4-*b*]phenoxazine, 4*H*-[3,1]benzoxazino-5,8-quinone and benzoxazole derivatives
Paolo Bruni, Patricia Carloni, Carla Conti, Elisabetta Giorgini, Lucedio Greci, Marco Iacussi, Pierluigi Stipa and Giorgio Tosi	6795	Competition between nucleophilic addition and electron-transfer process in the reaction of 9-diazo-10-anthrone with Grignard reagents
Mauri Lounasmaa, Reija Jokela, Ulla Anttila, Pirjo Hanhinen and Christiane Laine	6803	Short synthetic route to (±)-geissoschizine
Marcello Tiecco, Lorenzo Testaferri and Luana Bagnoli	6811	Alkenyl nitrones cyclizations induced by phenylselenenyl bromide. A convenient synthetic route to 1,2-oxazines
	I	Instructions to Contributors

NUMBER 20

Contents

	iii	Publisher's Announcement
	v	Contributors to this Issue
	vii	Graphical Abstracts
		TETRAHEDRON REPORT NUMBER 400
Robert A. McClelland	6823	Flash photolysis generation and reactivities of carbenium ions and nitrenium ions
		ARTICLES
Xiongwei Shi, Athula B. Attygalle, Shang-Cheng Xu, Viqar U. Ahmad and Jerrold Meinwald	6859	Synthesis and absolute configuration of 2-(12'-aminotridecyl)-pyrrolidine, a defensive alkaloid from the Mexican bean beetle, *Epilachna varivestis*
Edmund I. Graziani, Raymond J. Andersen, Patrick J. Krug and D. John Faulkner	6869	Stable isotope incorporation evidence for the *de novo* biosynthesis of terpenoic acid glycerides by dorid nudibranchs
John T. Gupton, Scott A. Petrich, Lana L. Smith, Marc A. Bruce, Phong Vu, Karen X. Du, Eric E. Dueno, Claude R. Jones and James A. Sikorski	6879	The application of vinylogous iminium salts and related synthons to the regiocontrolled preparation of 2,3- and 2,5-disubstituted pyrroles
Takeyuki Akita and Keiji Kobayashi	6893	Intramolecular spin interactions between two nitronyl nitroxide or imino nitroxide radical units linked to thieno[2,3-*b*]thiophene and thieno[2,3-*b*]thieno[3',2'-*d*]thiophene chromophores
Barry M. Trost and David Barrett	6903	Synthesis and alkylation of cyclopentane β-ketoxime sulfones. α,α-Methylation–alkynylation of cyclopentanone
Eckart Leikauf, Frank Barnekow and Hubert Köster	6913	A combinatorial protecting group strategy for oligonucleotide synthesis
Vincent Dumontet, Odile Thoison, Olamrewaju R. Omobuwajo, Marie-Thérèse Martin, Guillaume Perromat, Angèle Chiaroni, Claude Riche, Mary Païs, Thierry Sévenet and A. Hamid A. Hadi	6931	New nitrogenous and aromatic derivatives from *Aglaia argentea* and *A. forbesii*
Christophe Cinquin, Michel Bortolussi and Robert Bloch	6943	A novel synthesis of 2,5-dihydropyrrole derivatives as enantiomerically enriched building blocks
Vadim A. Soloshonok and Valery P. Kukhar	6953	Biomimetic base-catalyzed [1,3]-proton shift reaction. A practical synthesis of β-fluoroalkyl-β-amino acids
Theo Lescrinier, Roger Busson, Jef Rozenski, Gerard Janssen, Arthur Van Aerschot and Piet Herdewijn	6965	Incorporation of 5-hydroxytryptophan in oligopeptides
Yongsong Huang, Martin Murray, Pierre Metzger and Geoffrey Eglinton	6973	Novel unsaturated triterpenoid hydrocarbons from sediments of Sacred Lake, Mt. Kenya, Kenya
Antonio Arcadi, Sandro Cacchi, Giancarlo Fabrizi, Fabio Marinelli and Paola Pace	6983	The palladium-catalysed vinylic substitution of vinyl triflates with β-substituted-α,β-unsaturated carbonyl compounds. An application to the synthesis of cardenolides
Kristof J. Dubois and Georges J. Hoornaert	6997	A new pathway to substituted 6-chloro-2-pyridinecarboxylic acid derivatives from the reaction of 4,6-dichloro-2-oxa-5-azabicyclo[2.2.2]oct-5-en-3-ones with nucleophiles
David StC. Black, Andrew J. Ivory and Naresh Kumar	7003	Reactivity of 3-substituted indolin-2-ones in Vilsmeier-type reactions of 4,6-dimethoxyindoles

José Carilla, Lluís Fajarí, Luis Juliá, Joan Sañé and Jordi Rius	7013	(2,6-Dichlorophenyl)bis(2,4,6-trichlorophenyl)methyl radical. Synthesis, magnetic behaviour and crystal structure
Christopher J. Easton, Craig A. Hutton, Martin C. Merrett and Edward R. T. Tiekink	7025	Neighbouring group effects promote substitution reactions over elimination and provide a stereocontrolled route to chloramphenicol
Julie Ince, Tracey M. Ross, Michael Shipman, Alexandra M. Z. Slawin and David S. Ennis	7037	Observations on the synthesis of functionalised methyleneaziridines
Federico Junquera, Francisco L. Merchán, Pedro Merino and Tomas Tejero	7045	A straightforward synthesis of L-isoserinal
Giovanni Ghigo, Glauco Tonachini and Paolo Venturello	7053	*Ab initio* theoretical investigation on the reactivity as bases of mixed LiMe/KOMe complexes. A model for Schlosser LICKOR superbase
Patricia Castejón, Albert Moyano, Miquel A. Pericàs and Antoni Riera	7063	Ready access to stereodefined β-hydroxy-γ-amino acids. Enantioselective synthesis of fully protected cyclohexylstatine
Vishwakarma Singh and Mini Porinchu	7087	Sigmatropic 1,2- and 1,3-acyl shifts in excited states: a novel, general protocol for the synthesis of tricyclopentanoids and protoilludanes
Carolyn V. Coulter, Juliet A. Gerrard, James A. E. Kraunsoe, Deborah J. Moore and Andrew J. Pratt	7127	(*S*)-Aspartate semi-aldehyde: synthetic and structural studies
Angelo G. Giumanini, Giancarlo Verardo, Paola Geatti and Paolo Strazzolini	7137	Aprotic diazotization in the presence of cuprous cyanide
Manat Pohmakotr, Auntika Takampon and Jantima Ratchataphusit	7149	1,1-Diphenoxy-2-(phenylsulfonyl)cyclopropane as a furan annulating agent
V. H. Deshpande, Beena Rai and R. A. Khan	7159	Simple syntheses of (+)-orthosporin and (–)-semivioxanthin methyl ether
Michael Bennett, Anthony J. Burke and W. Ivo O'Sullivan	7163	Aspects of the Algar–Flynn–Oyamada (AFO) reaction
Chiara B. Vicentini, Augusto C. Veronese, Maurizio Manfrini and Mario Guarneri	7179	Imidazo[4,5-*c*]pyrazoles: synthesis of 4-, 5- and 6-substituted derivatives
Francesca Clerici, Franco Galletti, Donato Pocar and Pietro Roversi	7183	Isothiazoles—VI. Cycloaddition of azides to isothiazole dioxides: synthesis of thiadiazabicyclo[3.1.0]hexene derivatives and their thermal rearrangement to thiazete dioxides, 1,2,6-thiadiazine dioxides and pyrazoles
	I	Instructions to Contributors

NUMBER 21

Contents

TETRAHEDRON SYMPOSIA-IN-PRINT NUMBER 61

NEW SYNTHETIC METHODS—IV. ORGANOMETALLICS IN ORGANIC CHEMISTRY

Guest Editor: ISTVÁN E. MARKÓ

Université catholique de Louvain, Louvain-la-Neuve, Belgium

	iii	Contributors to this Issue
	vii	Announcement: Tetrahedron Symposia-in-Print
	xiii	Preface
	xv	Graphical Abstracts
Ingo Klement, Mario Rottländer, Charles E. Tucker, Tahir N. Majid, Paul Knochel, Patricia Venegas and Gérard Cahiez	7201	Preparation of polyfunctional aryl and alkenyl zinc halides from functionalized unsaturated organolithiums and their reactivity in cross-coupling and conjugated addition reactions
Mark Lautens, Robert N. Ben and Patrick H. M. Delanghe	7221	Allyl 1,1-bimetallic species: their preparation and reactivity profile
Denis Brasseur, Ilane Marek and Jean-F. Normant	7235	Diastereoselective synthesis of heterosubstituted organogembismetallic reagents. Application to a new propargylmetalation reaction of vinyl metals
Stephen F. Martin, Hui-Ju Chen, Anne K. Courtney, Yusheng Liao, Michael Pätzel, Melissa N. Ramser and Allan S. Wagman	7251	Ring-closing olefin metathesis for the synthesis of fused nitrogen heterocycles
Bruce H. Lipshutz, Gerd Bülow, Richard F. Lowe and Kirk L. Stevens	7265	Allylated aromatics via Ni-catalyzed couplings of benzylic chlorides and vinylic organometallics
Shu Kobayashi and Mineko Horibe	7277	Preparation of both enantiomers of 2-methyl-3-hydroxythioesters based on chiral Lewis acid-controlled synthesis
Koichi Mikami and Masaki Shimizu	7287	Prins cyclization to tetrahydrofuran units of polyether antibiotics: remarkable siloxy effect for stereocontrolled cyclization
Naoyuki Hanaki, Kazuaki Ishihara, Makoto Kaino, Yuji Naruse and Hisashi Yamamoto	7297	Stereospecific annulation of hydroxy vinyl ethers. Synthetic application to polyfunctionalized cyclic compounds
Mogens Johannsen and Karl Anker Jørgensen	7321	Solvent effects in asymmetric hetero Diels–Alder and ene reactions
Alois Fürstner, Andreas Ernst, Helga Krause and Arne Ptock	7329	Low-valent titanium induced indole formation: syntheses of secofascaplysin, indolopyridocoline and an endothelin receptor antagonist
Hans-Joachim Knölker, Gerhard Baum and Jörn-Bernd Pannek	7345	Transition metal–diene complexes in organic synthesis—XXVII. Synthesis and reactivity of 4a,9a-dihydro-9*H*-carbazoles
E. Peter Kündig, James Leresche, Lionel Saudan and Gérald Bernardinelli	7363	Chiral tricarbonyl(η^6-cyclobutabenzene)chromium complexes. Diastereoselective synthesis and use in asymmetric cycloaddition reactions
Paola Ciapetti, Massimo Falorni and Maurizio Taddei	7379	$CrCl_2$ Mediated addition of allylic halides or phosphates to *N*-protected α-amino aldehydes. Stereocontrolled synthesis of a new core for C_2 symmetric HIV-protease inhibitors
Johannes G. Donkervoort, Alison R. Gordon, Craig Johnstone, William J. Kerr and Udo Lange	7391	Development of modified Pauson–Khand reactions with ethylene and utilisation in the total synthesis of (+)-taylorione
Reinhard W. Hoffmann, Hans-Christian Stiasny and Jochen Krüger	7421	Diastereoselective bromine/lithium exchange reactions of 3-alkoxy-1,1-dibromo-alkanes
Alain Krief, Benoît Kenda and Bruno Remacle	7435	Stereoselective syntheses of 1,2-dialkyl-1-phenyl cyclopentanes involving intramolecular carbolithiation of α-thioalkenes
Alain Krief, Benoît Kenda, Christophe Maertens and Bruno Remacle	7465	Stereoselective syntheses of 1,2-dialkyl-1-phenyl cyclopentanes involving intramolecular carbolithiation of olefins
Dieter Schinzer and Kerstin Ringe	7475	Total syntheses of (±)-β-pinguisene and (±)-pinguisenol
Franck Le Bideau, Fabienne Gilloir, Ylva Nilsson, Corinne Aubert and Max Malacria	7487	Stereocontrolled synthesis of α-trialkylsilyl-β,γ-unsaturated aldehydes via palladium(0) catalysis. Synthetic usefulness

Ylva I. M. Nilsson, Roberto G. P. Gatti, Pher G. Andersson and Jan-E. Bäckvall	7511	Palladium(II)-catalyzed carbocyclization: vinylpalladium in 1,4-oxidation of conjugated dienes
John P. Wolfe, Roger A. Rennels and Stephen L. Buchwald	7525	Intramolecular palladium-catalyzed aryl amination and aryl amidation
Markus Peer, Johannes C. de Jong, Matthias Kiefer, Thomas Langer, Heiko Rieck, Heico Schell, Peter Sennhenn, Jürgen Sprinz, Henning Steinhagen, Burkhard Wiese and Günter Helmchen	7547	Preparation of chiral phosphorus-, sulfur- and selenium-containing 2-aryl-oxazolines
V. Gouverneur and L. Ghosez	7585	Electrophilic amination of 2-azadienes
	I	Instructions to Contributors

NUMBER 22

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
		TETRAHEDRON REPORT NUMBER 401
Graeme R. Jones and Yannick Landais	7599	The oxidation of the carbon–silicon bond
		ARTICLES
Robert Rodebaugh and Bert Fraser-Reid	7663	Evidence for cyclic bromonium ion transfer in electrophilic bromination of alkenes: reaction of ω-alkenyl glycosides with aqueous *N*-bromosuccinimide
Sean D. Derrick, Richard Boehme, Ken M. Wong, Frank Nemeth, Kelly Tanaka, Brian Rumberg, Richard A. Beekman and Peter W. Dibble	7679	Steric and electronic effects in imine–hemiaminal ring–chain tautomerism
Thomas Oberhauser and Vladimir Meduna	7691	On the stereochemical purity of (+)-7-aminocephalosporanic acid
M. Leclaire, R. Levet, F. Péricaud, L. Ricard and J. Y. Lallemand	7703	Studies on the preparation of the 'Ziegler intermediate', a key intermediate in the total synthesis of forskolin
Laurent Micouin, Martine Bonin, Marie-Pierre Cherrier, Alain Mazurier, Alain Tomas, Jean-Charles Quirion and Henri-Philippe Husson	7719	Asymmetric synthesis—XXXIX. Synthesis of 3-substituted piperidin-2-ones from chiral non-racemic lactams
Ricardo Rodríguez, M. Angels Estiarte, Anna Diez, Mario Rubiralta, Anna Colell, Carmen García-Ruiz and José C. Fernández-Checa	7727	Conformationally restricted analogues of methionine: synthesis of chiral 3-amino-5-methylthio-2-piperidones
Ponnusamy Shanmugam and Krishnamoorthy Rajagopalan	7737	Synthesis of linearly fused tricyclic compounds via thermal oxy-Cope rearrangement
Antonio Garofalo, Giuseppe Campiani, Silvia M. Ciani, Isabella Fiorini and Vito Nacci	7745	Polycondensed heterocycles—IX. Pyrrolo[2,1-*c*][1,4]benzothiazepines. Synthesis of 3-(dimethylamino)methyl derivatives
Vicente Fornés, Hermenegildo García, Miguel A. Miranda, Fatemeh Mojarrad, María-José Sabater and Nadia N. E. Suliman	7755	Zeolite-based heterogeneous photosensitizers containing triphenylpyrylium and dibenzotropylium cations. Modifications of the product selectivity in the cyclodimerization of 1,3-cyclohexadiene
Mette Lene Falck-Pedersen and Kjell Undheim	7761	Asymmetric synthesis of phenylbis(glycines)

Erada Oguntoye, Sabine Szunerits, James H. P. Utley and Peter B. Wyatt	7771	Electro-organic reactions—XLVI. Diels–Alder trapping of *o*-quinodimethane generated by redox-mediated cathodic reduction of α,α'-dibromo-*o*-xylene in the presence of hindered dienophiles
Gavin L. Edwards, Craig A. Muldoon and David J. Sinclair	7779	Cyclic enol ether synthesis via arenesulfonyl iodide additions to alkynols
István Hermecz, József Kökösi, Benjamin Podányi and Zsuzsanna Liko	7789	Nitrogen bridgehead compounds—LXXXVII. Synthesis of 3-azarutecarpine (14-azanauclefine) and its 7-methyl derivative
Mª Isabel Matheu, Raouf Echarri, Cèlia Domènech and Sergio Castillón	7797	2-Alkoxy-2-fluoro-glycosyl fluorides as 1,2-dielectrophilic synthons for the synthesis of naphtho- and benzo-dihydrofuran derivatives
	I	Tetrahedron Reports on Organic Chemistry
	XXIII	Instructions to Contributors

NUMBER 23

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
	7807	Corrigenda
Rong-Liang Chen and Robert S. H. Liu	7809	New hindered isomers of 3-dehydroretinal (vitamin A_2)
Masahiko Hayashi, Kazuyuki Ono, Haruhisa Hoshimi and Nobuki Oguni	7817	Asymmetric ring opening reactions of symmetrical *N*-acylaziridines with thiols catalyzed by chiral dialkyl tartrate–diethylzinc complexes
Michael Schmidt, Stephanie Hervé, Norbert Klempier and Herfried Griengl	7833	Preparation of optically active cyanohydrins using the (*S*)-hydroxynitrile lyase from *Hevea brasiliensis*
Loïk Viallon, Olivia Reinaud, Patrice Capdevielle and Michel Maumy	7841	Reactions of 4-dialkylamino-5-methoxy-1,2-benzoquinones in acidic media: selective C-alkylation or N-dealkylation
Pranab Mandal, Asok Nath and R. V. Venkateswaran	7855	Facile photolytic demethoxylation of 3-methoxychromones
M. Teresa Barros, M. Odile Januario-Charmier, Christopher D. Maycock and Mariana Pires	7861	Chemoselectivity in the manipulation of polyhydroxylated compounds derived from the diastereoselective dihydroxylation of optically active allylic enoate alcohols
Ugo Chiacchio, Antonino Corsaro, Venerando Pistarà, Antonio Rescifina, Giovanni Romeo and Roberto Romeo	7875	An asymmetric approach to pyrrolidinone and pyrrolizidinone systems by intramolecular oxime–olefin cycloaddition
Antonino Corsaro, Giuseppe Buemi, Ugo Chiacchio, Giancarlo Perrini, Venerando Pistarà and Roberto Romeo	7885	The role of the hydrogen bonding in cycloadditions of benzonitrile oxide with cyanophenols
Ahmad M. Farag, Kamal M. Dawood and Zaghloul E. Kandeel	7893	Synthesis and reactivity of 3-(benzothiazol-2-yl)-3-oxopropanenitrile
Frank J. A. D. Bakkeren, Antonius J. H. Klunder and Binne Zwanenburg	7901	Kinetic resolution of mono- and bicyclic Diels–Alder adducts via Sharpless asymmetric dihydroxylation
Alessandro Pezzella, Alessandra Napolitano, Marco d'Ischia and Giuseppe Prota	7913	Oxidative polymerisation of 5,6-dihydroxyindole-2-carboxylic acid to melanin: a new insight
Rivka Goobes, Amira Rudi, Yoel Kashman, Micha Ilan and Yossi Loya	7921	Three new glycolipids from a Red Sea sponge of the genus *Erylus*
Pawel J. Serafinowski and Colin L. Barnes	7929	New method for the preparation of 3'- and 2'-phosphoramidites of 2'- and 3'-difluoromethyleneuridine

Elisabetta Rossi and Elena Pini	7939	*N*-Haloamidines—VII. 4-Amino-5-chloroimidazoles and 4-amino-5-unsubstituted imidazoles from *N*-chloro-*N'*-arylbenzamidines and 1,1-diaminoethenes
Anna Berlin, Augusto Canavesi, Gilberto Schiavon, Sandro Zecchin and Gianni Zotti	7947	Electrooxidation products of methylindoles: mechanisms and structures
Isidro G. Collado, James R. Hanson and Antonio J. Macías-Sánchez	7961	The cleavage of caryophyllene oxide catalysed by tetracyanoethylene
Antonio García Martínez, Antonio Herrera Fernández, Florencio Moreno Jiménez, Pablo J. Muñoz Martínez, Cristina Alonso Martín and Laksminarayanapuran R. Subramanian	7973	New procedures for the synthesis of heterocyclic substituted and 2,4-difunctionalized pyrimidines
Tatjana Vuljanic, Karl-Erik Bergquist, Henrik Clausen, Sarbari Roy and Jan Kihlberg	7983	Piperidine is preferred to morpholine for Fmoc cleavage in solid-phase glycopeptide synthesis as exemplified by preparation of glycopeptides related to HIV gp120 and mucins
	I	Instructions to Contributors

NUMBER 24

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
		TETRAHEDRON REPORT NUMBER 402
Deevi Basavaiah, Polisetti Dharma Rao and Rachakonda Suguna Hyma	8001	The Baylis–Hillman reaction: a novel carbon–carbon bond forming reaction
		ARTICLES
I. Wesley Elliott, Milton J. Sloan and Earl Tate	8063	Synthetic entry to dibenzo[*b,f*]oxinin and dibenzo[*b,f*]azonine derivatives through a dibenzo[*a,e*]cyclooctен-5-one
Namthip Sitachitta, Madhavi Gadepalli and Bradley S. Davidson	8073	New α-pyrone-containing metabolites from a marine-derived actinomycete
Yasushi Todoroki, Sei-ichi Nakano, Nobuhiro Hirai and Hajime Ohigashi	8081	Ring conformational requirement for biological activity of abscisic acid probed by the cyclopropane analogues
Mitsuru Ohkubo, Teruyuki Nishimura, Hideki Jona, Teruki Honma and Hajime Morishima	8099	Practical synthesis of indolopyrrolocarbazoles
Hajime Ikeda, Eriko Sato, Takeshi Sugai and Hiromichi Ohta	8113	Yeast-mediated synthesis of optically active diols with C_2 symmetry and (*R*)-4-pentanolide
Takeshi Sugai, Hajime Ikeda and Hiromichi Ohta	8123	Biocatalytic approaches to both enantiomers of (2*R**,3*S**)-2-allyloxy-3,4,5,6-tetrahydro-2*H*-pyran-3-ol
Midori Okada, Osamu Kitagawa, Masao Fujita and Takeo Taguchi	8135	A mild method for generation of *p*-methoxybenzyl cation through NIS-mediated activation of *p*-methoxybenzyl 4-pentenyl ether
Hiroki Sato, Naohiro Isono, Irie Miyoshi and Miwako Mori	8143	1,1-, 1,2-, and 1,4-eliminations from the corresponding dihalogenated compounds using $Bu_3SnSiMe_3$-F^-
Hee Jae Shin, Masahiro Murakami, Hisashi Matsuda and Katsumi Yamaguchi	8159	Microviridins D–F, serine protease inhibitors from the cyanobacterium *Oscillatoria agardhii* (NIES-204)
Mase Lee, Hiroyuki Moritomo and Ken Kanematsu	8169	Construction of three types of fused isoindoles via furan–pyrrole ring exchange reaction
Sachiko Tsukamoto, Haruko Kato, Hiroshi Hirota and Nobuhiro Fusetani	8181	Ceratinamides A and B: new antifouling dibromotyrosine derivatives from the marine sponge *Pseudoceratina purpurea*

Tomofumi Miyamoto, Kenichiro Sakamoto, Kazuyoshi Arao, Tetsuya Komori, Ryuichi Higuchi and Takuma Sasaki	8187	Dorisenones, cytotoxic spongian diterpenoids, from the nudibranch *Chromodoris obsoleta*
Kenzi Hori, Takayuki Inoue and Hiroshi Tsukube	8199	Theoretical study on crown compounds as a building block of the molecule with function II. Density functional approach to analyze Li^+ selectivity of aza-12-crown-4 with a functionalized arm
Janos Sapi, Seloua Dridi, Jacqueline Laronze, Françoise Sigaut, Dominique Patigny, Jean-Yves Laronze, Jean Lévy and Loïc Toupet	8209	Indole as a tool in synthesis. Indolenine approach to 4,5-epoxy-10-normorphinans
L. Hecquet, J. Bolte and C. Demuynck	8223	Enzymatic synthesis of 'natural-labeled' 6-deoxy-L-sorbose precursor of an important food flavor
Derek H. R. Barton, Stephane D. Gero, Pascale Holliday and Béatrice Quiclet-Sire	8233	Exploratory experiments with aryl telluride carbohydrates. Synthesis of carbocycles using intramolecular radical cyclization
B. Abribat, Y. Le Bigot et A. Gaset	8245	Ethérification sélective et sans solvant de fonctions hydroxyles de polyoxyalkylenes
Manfred Schlosser, Dominique Michel, Zhi-wei Guo and Charles J. Sih	8257	α-Fluoro analogues of inflammation inhibiting α-arylpropionic acids
Catherine Helgorsky, Annie Saux, Marie Degueil-Castaing et Bernard Maillard	8263	Etude de la thermolyse de peroxyacétals et peroxycétals
Carlos Alemán, Antxon Martínez de Ilarduya, Ernest Giralt and Sebastián Muñoz-Guerra	8275	Analysis of the conformational preferences of (4*R*,5*R*)-4,5-bis(alkylcarbamoyl)-1,3-dioxolanes
Giovanni Sartori, Andrea Pastorio, Raimondo Maggi and Franca Bigi	8287	Dehydration–hydration of α-alkynols over zeolite catalyst. Selective synthesis of conjugated enynes and α,β-unsaturated ketones
Yasumasa Hamada, Fumiaki Yokokawa, Mototsugu Kabeya, Keiichiro Hatano, Yukihisa Kurono and Takayuki Shioiri	8297	An efficient synthesis of C_{20}–C_{25} building blocks for calyculin A
Ruud J. W. Schuurman, André v.d. Linden, Reinier P. F. Grimbergen, Roeland J. M. Nolte and Hans W. Scheeren	8307	Effect of branching in alkyl groups of tertiary amines on their performance as catalysts in the high pressure promoted Baylis–Hillman reaction
Patrick J. Murphy, Harri Lloyd Williams, David E. Hibbs, Michael B. Hursthouse and K. M. Abdul Malik	8315	Biomimetic model studies towards ptilomycalin A
Fernando F. Huerta, Cecilia Gómez and Miguel Yus	8333	Ketalised 3,4-dihydroxybutyllithiums: new intermediates to transfer four-carbon diol functionality to electrophilic reagents
Yuewei Guo, Anna Madaio, Enrico Trivellone, Gennaro Scognamiglio and Guido Cimino	8341	Structural and stereochemical studies of saraines: macrocyclic alkaloids of the sponge *Reniera sarai*
Waël Baidossi, Herbert Schumann and Jochanan Blum	8349	Selective transformations of phenylated diynes to polycyclic compounds by the $RhCl_3$- and $PtCl_4$-Aliquat 336® ion pair catalysts
Anna López, Marcial Moreno-Mañas, Roser Pleixats, Anna Roglans, Jesús Ezquerra and Concepción Pedregal	8365	Ethyl *N*-(diphenylmethylene)glycinate as anionic glycine equivalent. Monoalkylation, dialkylation and Michael additions under solid–liquid phase-transfer catalysis
	I	Instructions to Contributors

NUMBER 25

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
Mitchell D. Refvik and Adrian L. Schwan	8387	Preparation of *N,N*-bis(trimethylsilyl)-1-alkenesulfenamides and their desilylative conversion to 1-alkenesulfenimines. New stable 1-alkenesulfenic acid derivatives
Peter K. Freeman, Jung-suk Jang and Christian M. Haugen	8397	The photochemistry of polyhaloarenes—XIII. The photohydrodehalogenation of 3,4-dibromobiphenyl
Lakshmi B. Akella and Robert Vince	8407	Enantioselective synthesis of 2-[5-(9*H*-purin-9-yl)-2-cyclopenten-1-yl]-ethanol analogues as potential antiviral agents
Sei-Hyun Choi and Kyongtae Kim	8413	Novel preparation of *N'*-arylthiocarbamoyl-*N,N*-dialkylamidines and their synthetic utilities
Tsutomu Minato, Shinichi Yamabe, Toshio Hasegawa and Takahisa Machiguchi	8439	Why are the troponoid rings of the mesylate and tosylate of tropone oxime cleaved easily by nucleophiles?
Harumi Kaga, Kouhei Goto, Tomiki Takahashi, Masao Hino, Takashi Tokuhashi and Kazuhiko Orito	8451	A general and stereoselective synthesis of the capsaicinoids via the orthoester Claisen rearrangement
David Barrett, Hiroshi Sasaki, Takayoshi Kinoshita, Akihiko Fujikawa and Kazuo Sakane	8471	A novel synthesis of the pyrazolo[1,5-*a*]quinoline ring system. New N1–C2 bridged DNA gyrase inhibitors via a novel tandem 1,4-conjugate addition–Michael [3 + 2] annulation process
Oliver Mogck, Volker Böhmer and Walter Vogt	8489	Hydrogen bonded homo- and heterodimers of tetra urea derivatives of calix[4]arenes
Helga Szelinski, Dominique Niethammer, Peizhu Tian and Harry Kurreck	8497	Porphyrins linked to high acceptor strength cyano quinones as models for the photosynthetic reaction center
Hervé Dulphy, Jean-Louis Gras and Tore Lejon	8517	Methoxymethylation of tartrate as a strategy for the synthesis of chiral building blocks
Joël Moyroud, Jacques Gelin, Alain Chêne et Jacques Mortier	8525	Synthèse d'analogues structuraux de thaxtomines, phytotoxines responsables de la gale de la pomme de terre
Komandla Mallareddy and S. Prahlada Rao	8535	A concise enantiospecific synthesis of analogues of monocerin
Juan Almena, Francisco Foubelo and Miguel Yus	8545	Nitrogen-containing remote functionalised organolithium compounds by reductive opening of five- and six-membered heterocycles
Harry Adams, Neil A. Bailey, Roger Brettle, Richard Cross, Martyn Frederickson, Edwin Haslam, Fiona S. MacBeath and Gareth M. Davies	8565	The shikimate pathway—VIII. Synthesis of (–)-3(*R*)-amino-4(*R*),5(*R*)-dihydroxy-1-cyclohexene-1-carboxylic acid: the 3(*R*)-amino analogue of (–)-shikimic acid
Isabel López, Anna Diez and Mario Rubiralta	8581	Synthetic applications of 2-aryl-4-piperidones—XI. A new synthesis of the E-azaeburnamine skeleton
M.-Lluïsa Bennasar, Ester Zulaica, Bilal A. Sufi and Joan Bosch	8601	Construction of the pentacyclic ring system of apogeissoschizine
Gonzalo Blay, Luz Cardona, Begoña García, Luisa Lahoz and José R. Pedro	8611	The reduction of α,β-unsaturated nitriles and α-halonitriles with sodium hydrogen telluride
	I	Instructions to Contributors

NUMBER 26

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
		TETRAHEDRON REPORT NUMBER 403
Matthew J. Tozer and Timothée F. Herpin	8619	Methods for the synthesis of *gem*-difluoromethylene compounds
		ARTICLES
Mikaela N. Keynes, Marion A. Earle, Manjula Sudharshan and Philip G. Hultin	8685	Synthesis and asymmetric alkylation of glucose-derived bicyclic oxazinones: an evaluation of their use as 'chiral glycines'
John A. Zoltewicz, Norbert M. Maier and Walter M. F. Fabian	8703	Atropisomerism of cofacial pyridine rings. Synthesis, proton NMR spectra and conformations of 1,8-di(3'-pyridyl)naphthalene
R. Alan Jones, Marielena Karatza, Tevita N. Voro, Pervin U. Civcir, Annete Franck, Orhan Ozturk, John P. Seaman, Alexander P. Whitmore and David J. Williamson	8707	Extended heterocyclic systems—I. The synthesis and characterisation of pyrrolylpyridines, alternating pyrrole:pyridine oligomers and polymers, and related systems
Gerhard Riehs, Ernst Urban and Horst Völlenkle	8725	A key step towards EPC synthesis of (+)-heptelidic acid
Wolfram Duczek, Franz Tittelbach, Burkhard Costisella and Hans-Joachim Niclas	8733	Reaction of [60]fullerene with 5-imino-1,2,4-thiadiazolidine-3-ones: formation of new C_{60}-fused heterocycles
Shanghui Hu, Xufang Tian, Weihua Zhu and Qicheng Fang	8739	Microbial transformation of taxoids: selective deacetylation and hydroxylation of 2α,5α,10β,14β-tetra-acetoxy-4(20),11-taxadiene by the fungus *Cunninghamella echinulata*
Yong Tang, Zheng-Fa Chi, Yao-Zeng Huang, Li-Xin Dai and Yi-Hua Yu	8747	Highly stereoselective synthesis of vinyl and ethynylcyclopropane 1,1-dicarboxylic esters via semi-stabilized telluronium ylides
Sharmila K. Thakur and Bhaskar D. Hosangadi	8755	Synthesis of photochromic spiroindolinopyrans with extended conjugation
Paolo Tavecchia, Michael Kurz, Luigi Colombo, Riccardo Bonfichi, Enrico Selva, Sergio Lociuro, Ettore Marzorati and Romeo Ciabatti	8763	Chemical modification of the GE 2270A macrocycle (MDL 62,879)
Alessandra Napolitano, Alessandro Pezzella, Marco d'Ischia and Giuseppe Prota	8775	New pyrrole acids by oxidative degradation of eumelanins with hydrogen peroxide. Further hints to the mechanism of pigment breakdown
Ronny Neumann and David Juwiler	8781	Oxidations with hydrogen peroxide catalysed by the $[WZnMn(II)_2(ZnW_9O_{34})_2]^{12-}$ polyoxometalate
Andrzej Zwierzak and Anna Napieraj	8789	The thermally induced synthesis of *N*-(diethoxyphosphoryl)aldimines
Mark A. Collins and D. Neville Jones	8795	Efficient synthesis of bicyclo[2.2.1]heptane derivatives via stereoselective intramolecular Michael reactions of vinyl sulfones
Bjørg S. Møller, Tore Benneche and Kjell Undheim	8807	Palladium catalysis in bridge-forming reactions between stereoselectively substituted glycine auxiliaries
Bart P. Medaer, Koen J. Van Aken and Georges J. Hoornaert	8813	Synthesis of new 1*H*-tetrazoles and 1,2,3-triazoles via reactions of 3(,5)-(di)chloro-2*H*-1,4-(benz)oxazin-2-ones with sodium azide or diazocompounds
Osman Achmatowicz and Ewa Białecka-Florjanczyk	8827	Mechanism of the carbonyl–ene reaction

Luc Van Meervelt, Oleg B. Smolii, Nikolai I. Mishchenko, Dmitrii B. Shakhnin, Evgenii A. Romanenko and Boris S. Drach	8835	A challenging synthetic approach to phosphonium ylide–betaines of the pyrimidine series
Ionel I. Mangalagiu, Ion I. Druta, Mircea A. Constantinescu, Ionel V. Humelnicu and Magda C. Petrovanu	8853	Pyridazinium ylides. Regiochemistry
Hussni A. Muathen	8863	Mild chlorination of aromatic compounds with tin(IV) chloride and lead tetraacetate
Roberta Cacciapaglia, Luigi Mandolini and Francesco Spadola	8867	The Ba(II) complex of a crown ether bearing a sulphydryl side-arm as turnover catalyst of ester cleavage
Juma'a R. Al-Dulayymi, Mark S. Baird, Valeriy A. Pavlov and Alexander I. Kurdjukov	8877	Dipolar cycloaddition of a phosphorylnitrile oxide to functionalised cyclopropenes
Ugo Chiacchio, Giuseppe Gumina, Antonio Rescifina, Roberto Romeo, Nicola Uccella, Francesco Casuscelli, Anna Piperno and Giovanni Romeo	8889	Modified dideoxynucleosides: synthesis of 2'-*N*-alkyl-3'-hydroxyalkyl-1',2'-isoxazolidinyl thymidine and 5-fluorouridine derivatives
Michele D'Ambrosio, Antonio Guerriero, Giuseppe Chiasera, Francesco Pietra and Marco Tatò	8899	Epinardins A–D, new pyrroloiminoquinone alkaloids of undetermined deep-water green demosponges from pre-antarctic Indian Ocean
J. Campos, M. J. Pineda, J. A. Gómez, A. Entrena, M. A. Trujillo, M. A. Gallo and A. Espinosa	8907	5-fluorouracil derivatives—I. Acyclonucleosides through a tin(IV) chloride-mediated regiospecific ring opening of alkoxy-1,4-diheteroepanes
David StC. Black, Naresh Kumar and Darryl B. McConnell	8925	Reaction of some 4,6-dimethoxyindoles with oxalyl chloride
Peter J. Ainsworth, Donald Craig, Andrew J. P. White and David J. Williams	8937	Intramolecular Diels–Alder reactions of carbon acetal-tethered trienes
Victor Martínez-Merino, José I. García, José A. Mayoral, María J. Gil, José M. Zabalza, Jean P. Fayet, Marie C. Vertut, Alain Carpy and Alberto González	8947	Molecular modelling of the isothiazolo[5,4-*b*]pyridin-3(2*H*)-one derivatives
	I	Instructions to Contributors

NUMBER 27

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
Yvan Boulanger, Abdesslem Khiat, Zhen-Hua Zhou, Gaétan Caron and Lolita O. Zamir	8957	NMR and molecular modeling study of paclitaxel putative precursors
Michael J. Konkel and Robert Vince	8969	Cyclohexenyl nucleosides: synthesis and biological activity of *trans*-3-(purin-9-yl)-4-cyclohexenylcarbinols
Richard A. Bartsch, Mark D. Eley, Alan P. Marchand, Rajesh Shukla, Kaipenchery A. Kumar and G. Madhusudhan Reddy	8979	Syntheses of bis- and tetra-crowned clefts and studies of their selectivities in metal ion complexation

Muthusamy Jayaraman, Abdul Rakeep Deshmukh and Baburao M. Bhawal	8989	Application of (+)-(1*S*,2*S*)-2-amino-1-phenylpropan-1,3-diol in the formal total synthesis of carbapenems, novel 4-cyano-β-lactams and β-hydroxy aspartates
Muthusamy Jayaraman, Vedavati G. Puranik and Baburao M. Bhawal	9005	Stereoselective synthesis of homochiral pyrrolidinones and *cis,cis*-bis-β-lactams from (+)-(1*S*,2*S*)-2-amino-1-phenylpropan-1,3-diol
Naoko Morisaki, Kazuhiko Inoue, Hisayoshi Kobayashi, Ryuichi Shirai, Masuo Morisaki and Shigeo Iwasaki	9017	Coordination of alkali metal cation to oxygen functions to form adduct ion in fast atom bombardment mass spectrometry
Keishi Ishida, Hisashi Matsuda, Masahiro Murakami and Katsumi Yamaguchi	9025	Kawaguchipeptin A, a novel cyclic undecapeptide from cyanobacterium *Microcystis aeruginosa* (NIES-88)
Hideyuki Shigemori, Yasushi Tanaka, Katsukiyo Yazawa, Yuzuru Mikami and Jun'ichi Kobayashi	9031	Brasilinolide A, new immunosuppressive macrolide from actinomycete *Nocardia brasiliensis*
Heike Faltz, Jörg Bohrisch, Wilko Wohlauf, Michael Pätzel, Peter G. Jones and Jürgen Liebscher	9035	Synthesis of chiral condensed *S*-heterocycles via stereoselective Michael-like addition to butenolides and α,β-unsaturated lactams
Kassoum Nacro, Michel Baltas, Jean-Marc Escudier and Liliane Gorrichon	9047	Enhanced diastereoselectivity in the addition of ester enolate to optically active α,β-epoxyaldehydes obtained from nerol and geraniol
Jean-Pierre Praly, Christian Bonnevie, Peter Haug and Gérard Descotes	9057	Synthesis and photolysis of protected D-hex-2-ulopyranosyl azides
Daniel Royer, Michèle Doé de Maindreville, Jean-Yves Laronze, Jean Lévy and Ren Wen	9069	Reductive methylations of 2,7-dihydro derivatives of some oxygenated indole alkaloids like reserpine
Claude Agami, Dominique Bihan and Catherine Puchot-Kadouri	9079	Reactions of glyoxal-derived iminium ions with unsaturated silyl and silyloxy reagents
Catherine Kuehm-Caubère, Sandrine Adach-Becker, Yves Fort and Paul Caubère	9087	Expeditious and efficient syntheses of pure 4-methyl and 4,6-disubstituted dibenzothiophenes
Hélène Pellissier and Maurice Santelli	9093	Dialkylation of 2,3-butanedione diketal with 1,8-bis(trimethylsilyl)-2,6-octadiene (BISTRO). Application to the synthesis of estrone derivatives
Nicolas Vicart, Bernard Cazes and Jacques Gore	9101	Carbopalladation–sulphonylation of allene: a versatile preparation of 2-vinyl or 2-aryl allyl sulphones
Romila D. Charan, Mary J. Garson, Ian M. Brereton, Anthony C. Willis and John N. A. Hooper	9111	Haliclonacyclamines A and B, cytotoxic alkaloids from the tropical marine sponge *Haliclona* sp.
László Somsák, Erzsébet Sós, Zoltán Györgydeák, Jean-Pierre Praly and Gérard Descotes	9121	Synthesis and some transformations of 1-azido-glycopyranosyl cyanides—precursors of anomeric α-amino acids
K. S. Ravikumar and Srinivasan Chandrasekaran	9137	Chemo- and stereoselective reduction of α,β-epoxyketones with diisopropoxytitanium(III) tetrahydroborate
José-María Lassaletta, Rosario Fernández, Consolación Gasch and Juan Vázquez	9143	Formaldehyde dimethylhydrazone: a new neutral reagent for nucleophilic hydroformylation and hydrocyanation
Kris J. Buysens, Didier M. Vandenberghe and Georges J. Hoornaert	9161	Synthesis of new pyrrolo[3,4-*b*]- and [3,4-*c*]pyridin(on)es and related 1,7-naphthyridinones and 2,7-naphthyridines via intramolecular Diels–Alder reactions of 2(1*H*)-pyrazinones
Giuseppe Bartoli, Marcella Bosco, Renato Dalpozzo, Antonio De Nino, Emma Iantorno, Antonio Tagarelli and Gianni Palmieri	9179	Reaction of dianions of acyclic β-enamino ketones with electrophiles—VIII. Synthesis of trialkylsilylenaminones and α'-silylated β-diketones
Andrea Goti	9187	Synthesis and cycloaddition reactions of *N*-methylcyclobutylideneamine *N*-oxide

Luis A. Bañuelos, Purificación Cuadrado, Ana M. González-Nogal, Isabel López-Solera, Francisco J. Pulido and Paul R. Raithby	9193	The reduction of functionalized pyrazolium salts as a stereoselective route to functionalized pyrazolidines
Jonas Malmquist and Stefan Sjöberg	9207	Asymmetric synthesis of *p*-carboranylalanine (*p*-Car) and 2-methyl-*o*-carboranylalanine (Me-*o*-Car)
A. Scott Frame, Richard H. Wightman and Grahame Mackenzie	9219	Synthesis of 5-amino-4-sulfonamidoimidazole nucleosides as potential inhibitors of purine nucleotide biosynthesis, and of an imidazothiadiazine dioxide analogue of adenosine
Angel Díaz-Ortiz, José R. Carrillo, Enrique Díez-Barra, Antonio de la Hoz, María J. Gómez-Escalonilla, Andrés Moreno and Fernando Langa	9237	Diels–Alder cycloaddition of vinylpyrazoles. Synergy between microwave irradiation and solvent-free conditions
Ingrid Luyten and Piet Herdewijn	9249	Synthesis and conformational behavior of purine and pyrimidine β-D-*threo*-hex-3'-enopyranosyl nucleosides
Martín Avalos, Reyes Babiano, Pedro Cintas, Carlos J. Durán, José L. Jiménez and Juan C. Palacios	9263	NMR studies and semiempirical calculations on the structure of glycoamidines
Achille Barco, Simonetta Benetti, Carmela De Risi, Carlo F. Morelli, Gian P. Pollini and Vinicio Zanirato	9275	Generation and cycloaddition reactions of substituted 2-nitro-1,3-dienes
	I	Instructions to Contributors

NUMBER 28

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
		TETRAHEDRON REPORT NUMBER 404
Andreas Heumann and Marius Réglier	9289	The stereochemistry of palladium catalysed cyclisation reactions—C. Cascade reactions
		ARTICLES
Derek H. R. Barton and J. Albert Ferreira	9347	*N*-Hydroxypyridine-2(1*H*)-thione derivatives of carboxylic acids as activated esters—I. The synthesis of carboxamides
Derek H. R. Barton and J. Albert Ferreira	9367	*N*-Hydroxypyridine-2(1*H*)-thione derivatives of carboxylic acids as activated esters—II. Applications in peptide synthesis
Yoshihiko Matsumoto, Keisuke Mita, Keiji Hashimoto, Hideo Iio and Takashi Tokoroyama	9387	Selective cleavage of ethers using silica–alumina gel catalysts prepared by the sol–gel method
Hiroyuki Konno, Hidefumi Makabe, Akira Tanaka and Takayuki Oritani	9399	Syntheses of two possible diastereoisomers of the epoxy lactone proposed for an annonaceous acetogenin, epoxyrollin A
Junzo Otera, Yukihiro Fujita and Shunichi Fukuzumi	9409	The design of diastereoselective Mukaiyama–Michael reaction of ketene silyl acetal
Yukihiro Fujita, Junzo Otera and Shunichi Fukuzumi	9419	Diastereoselective Mukaiyama–Michael reaction of *O,S*-ketene silyl acetal
Kazuhiko Nakatani, Akimitsu Okamoto and Isao Saito	9427	6-*endo*- and 5-*exo*-digonal cyclizations of *o*-hydroxyphenyl ethynyl ketones: a key step for highly selective benzopyranone formation
Tatsufumi Okino, Erina Yoshimura, Hiroshi Hirota and Nobuhiro Fusetani	9447	New antifouling sesquiterpenes from four nudibranchs of the family Phyllidiidae

Victor Lee, Man-Ki Cheung, Wing-Tak Wong and Kin-Fai Cheng	9455	Studies on the acid-catalyzed dimerization of 2-prenylindoles
Kazuhiro Haraguchi, Hiromichi Tanaka, Shigeru Saito, Satomi Kinoshima, Motoi Hosoe, Kazuhiro Kanmuri, Kentaro Yamaguchi and Tadashi Miyasaka	9469	Uridine 5'-monoselenoacetals as substrates for diastereoselective homolytic C–C bond formation
Folkert Boße, Ashok Rao Tunoori, André J. Niestroj, Oliver Gronwald and Martin E. Maier	9485	Palladium-catalyzed cross-coupling reactions of arylmetal compounds with β-substituted α-iodoenones and a cyclohexyl triflate
Omar Cherkaoui, Pascal Nebois, Houda Fillion, Monique Domard and Bernard Fenet	9499	Regiospecific hetero Diels–Alder synthesis of furo[2,3-*g*] and furo[3,2-*g*]quinoline-4,9-diones
Jean-Marie Coustard	9509	1-Arylamino-1-methylthio-2-nitroethene in superacids: NMR study and reactivity of the formed hydroxynitrilium ions
Catherine Goux, Silvana Sigismondi, Denis Sinou, Montserrat Pérez, Marcial Moreno-Mañas, Roser Pleixats and Mercè Villarroya	9521	Palladium(0)-catalysed allylation of uracils and thiouracils. Influence of the solvent on the regioselectivity of the allylation
Giancarlo Fantin, Marco Fogagnolo, Mario Gleria, Alessandro Medici, Francesco Minto and Paola Pedrini	9535	Cyclophosphazenes containing acetyl salicylic (aspirin) substituents
Jerzy Suwinski, Paweł Wagner and Elizabeth M. Holt	9541	Reduction of aromatic nitrocompounds by sodium borohydride in methanol in the presence of sodium methoxide
Margaret A. Brimble and Stuart G. Robinson	9553	Synthesis of tricyclic aryl spiroacetals related to the papulacandins
Carlos Cativiela, María D. Díaz-de-Villegas, José A. Gálvez and José I. García	9563	Diastereoselective Strecker reaction of D-glyceraldehyde derivatives. A novel route to (2*S*,3*S*)- and (2*R*,3*S*)-2-amino-3,4-dihydroxybutyric acid
Mieczysław Makosza, Karol Grela and Wojciech Fabianowski	9575	Active metals prepared in liquid ammonia. Zinc and tin-promoted synthesis of β-hydroxyesters, homoallylic and homopropargylic alcohols
Diana I. Ivanova, Sergey V. Eremin and Vitali I. Shvets	9581	The synthesis of a coumarin analogue of retinal
M. Valeria D'Auria, Angela Zampella, Luigi Gomez Paloma, Luigi Minale, Cécile Debitus, Christos Roussakis and Valérie Le Bert	9589	Callipeltins B and C; bioactive peptides from a marine Lithistida sponge *Callipelta* sp.
Antonio G. González, Nelson L. Alvarenga, Ana Estévez-Braun, Angel G. Ravelo, Isabel L. Bazzocchi and Laila Moujir	9597	Structure and absolute configuration of triterpene dimers from *Maytenus scutioides*
Francisco Palacios, Domitila Aparicio and Jesús García	9609	Synthesis of secondary *E*-allylamines and β-aminophosphorylated compounds from β-functionalized enamines derived from phosphonium salts, phosphine oxides and phosphonates
Pedro Molina, Carmen López-Leonardo, Javier Llamas-Botía, Concepción Foces-Foces and Cristina Fernández-Castaño	9629	Unexpected Staudinger reaction of α-azidoacetonitriles α-phenyl substituted with triphenylphosphine. Preparation, X-ray crystal and molecular structures of a phosphazine, an aminophosphonium carbanion salt and a phosphazide, with (*Z*)-configuration
	I	Instructions to Contributors

NUMBER 29

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
Rolf Wagner, Teresa A. Rhoades, Yat Sun Or, Benjamin C. Lane and Jay R. Luly	9643	Selective epimerization and skeletal resection in the ascomycin framework: a study of the biological consequences of lactam rotamer selection
Robert D. Chapman, Richard A. O'Brien and Paul A. Kondracki	9655	N-Denitration of nitramines by dihydronicotinamides
Robert B. Palmer and Niels H. Andersen	9665	Conformational dynamics of 4-aryl-1,4-dihydropyridine calcium channel antagonists—I. Quantitation of C4–C1' bond rotational barriers
Christina M. Szabo, Yoichi Nakao, Wesley Y. Yoshida and Paul J. Scheuer	9681	Two diverse constituents of the cephalaspidean mollusk *Smaragdinella calyculata*
João V. Comasseto, Paulo H. Menezes, Helio A. Stefani, Gilson Zeni and Antônio L. Braga	9687	Addition of hydrogen halides to acetylenic selenides. Synthesis of 1-halo-1-selenoalkenes
Alan P. Marchand, D. Vidyanand, Zenghui Liu, Kaipenchery A. Kumar, Florencio Zaragoza, L. Kathleen Talafuse, Simon G. Bott, William H. Watson, Ram P. Kashyap, Herman L. Ammon and Zuyue Du	9703	Synthesis, characterization and crystal density modeling of polycarbocyclic oxiranes
Atsushi Nishida, Norio Kawahara, Mayumi Nishida and Osamu Yonemitsu	9713	Radical cyclization using a thioacetal group for radical generation
Wing-Yan Tsui and Geoffrey D. Brown	9735	Unusual metabolites of *Baeckea frutescens*
Karsten Dahlmeier, Kerstin Schierle and Eberhard Steckhan	9743	Electrochemical oxidation of chiral 5-substituted 2-oxazolidinones: a key building block for dichiral β-amino alcohols
Sergej V. Pasenok, Marijn E. de Roos and Wolfgang K. Appel	9755	Utilisation of ammonium and phosphonium perfluorocyclobutane ylides as fluoride anion source
René Csuk, Ulrike Höring and Martina Schaade	9759	Chain extension of aldonolactones by samarium iodide mediated Dreiding–Schmidt reactions and samarium assisted Imamoto reactions
Fabienne Fache, Frédéric Valot, Alexandra Milenkovic and Marc Lemaire	9777	Catalytic reductive N-alkylation of anilines. Application to the synthesis of *N*-aryl aminoacid precursors
Abdellah Miloudi, Douniazad El Abed, Jean-Marc Pons and Maurice Santelli	9785	Synthesis of indenone by self-condensation of 1-acetyl-2-methylcyclopentene and subsequent unusual autoxidation
Bernard Cathala, Khadija Raouf-Benchekroun, Chantal Gaiaup, Claude Picard, Louis Cazaux and Pierre Tisnès	9793	Synthesis and structure of macrocyclic dioxa-, dithia-, diazatetralactams and derivatives
Chun-mei Shu, Tai-sheng Yuan, Ming-chung Ku, Zong-chia Ho, Wen-chin Liu, Fa-shin Tang and Lee-gin Lin	9805	Diallylbis(arylazo)calix[4]arenes: the syntheses of calix[4]arenes with two different *para*-substituents
Liu-Sheng Zhu, Zhi-Zhen Huang and Xian Huang	9819	Stereoselective synthesis of (*E,E*)-1-arylselenobutadienes by cross-coupling reactions in the presence of palladium catalyst
Subramania Ranganathan, Natarajan Tamilarasu and Raja Roy	9823	Protein folding: the synthesis and conformational studies on cystinyl-cystinyl-cystine [-C*SSCCSSCCSSC*-] a novel cross linking motif

Volodymyr A. Kovtunenko, Konstantin G. Nazarenko and Anatoly M. Demchenko	9835	The derivatives of the 2a,4a-diazacyclopenta[*c,d*]azulene
Elizabeth Tyrrell, Michael W. H. Tsang, George A. Skinner and John Fawcett	9841	The application of ^{1}H nuclear magnetic resonance spectroscopy for the determination of the absolute configuration of chiral carboxylic acids
José M. Fraile, José A. Mayoral, Ana J. Royo, Rosa V. Salvador, Belén Altava, Santiago V. Luis and María I. Burguete	9853	Supported chiral amino alcohols and diols functionalized with aluminium and titanium as catalysts of Diels–Alder reaction
Patrizia Ciminiello, Carmela Dell'Aversano, Ernesto Fattorusso, Silvana Magno, Lucia Carrano and Maurizio Pansini	9863	Chemistry of Verongida sponges—VII. Bromocompounds from the Caribbean sponge *Aplysina archeri*
Antonio Cipiciani, Francesco Fringuelli and Anna Maria Scappini	9869	Enzymatic hydrolyses of acetoxy- and phenethylbenzoates by *Candida cylindracea* lipase
Lionel R. Milgrom, Philip J. F. Dempsey and Gokhan Yahioglu	9877	5,10,15,20-Tetrakis(N-protected-imidazol-2-yl)porphyrins
Kenneth J. M. Beresford and Douglas W. Young	9891	Versatile synthesis of L-α-amino acids stereospecifically labelled on the β-carbon atom
Daniele Donati, Aaron Garzon-Aburbeh, Benedetto Natalini, Carla Marchioro and Roberto Pellicciari	9901	Conformationally constrained tryptophan analogs. Synthesis of (±)-(*Z*)- and (±)-(*E*)-2-amino-2,3-methano-3-(indol-3-yl)-propanoic acids
Ikuo Funaki, Lambertus Thijs and Binne Zwanenburg	9909	Synthesis of 3-aminopyrrolidin-2-ones by an intramolecular reaction of aziridinecarboxamides
Mauri Lounasmaa, Lars Miikki and Arto Tolvanen	9925	Acid-catalysed epimerization of 1-substituted indolo[2,3-*a*]quinolizidines: stereoselective routes to *cis*- and *trans*-deethyleburnamonine starting from the same ester intermediate
Annika Kers, Inger Kers, Jacek Stawinski, Michał Sobkowski and Adam Kraszewski	9931	Studies on aryl H-phosphonates—III. Mechanistic investigations related to the disproportionation of diphenyl H-phosphonate under anhydrous basic conditions
Clive W. Bird	9945	The relationship of classical and magnetic criteria of aromaticity
	I	Instructions to Contributors

NUMBER 30

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
B. S. Mootoo, R. Ramsewak, R. Sharma, W. F. Tinto, A. J. Lough, S. McLean, W. F. Reynolds, J.-P. Yang and M. Yu	9953	Further briareolate esters and briareolides from the Caribbean gorgonian octocoral *Briareum asbestinum*
Bin Ye and Terrence R. Burke, Jr	9963	Synthesis of a difluorophosphonomethyl-containing phosphatase inhibitor designed from the X-ray structure of a PTP1B-bound ligand
Kosaku Hirota, Hironao Sajiki, Keiko Kubo, Masaru Kido and Kazuyuki Nakagawa	9971	Stable thioaldehydes: synthesis, structure assignment and stability of 6-amino-5-thioformyluracils
Masakazu Ohkita, Osamu Nishizawa, Toshiro Imai, Shinya Nishida and Takashi Tsuji	9979	Direct synthesis of 2-norbornanone dithioacetals from 2-cyclopentenone dithioacetals and dienophiles. Synthetic application of thermal interconversion between cyclic dithioacetals and the ring-opened vinyl sulfide forms

Junko Ito and Masatake Niwa	9991	Absolute structures of new hydroxystilbenoids, vitisin C and viniferal, from *Vitis vinifera* 'Kyohou'
Motoo Tori, Masayo Ikawa, Tetsuya Sagawa, Hirosuke Furuta, Masakazu Sono and Yoshinori Asakawa	9999	Synthesis of isovalerenenol, a sesquiterpene alcohol isolated from a soft coral, and the stability of related hydrindanone derivatives
Matthias Mag, Kerstin Jahn, Gerhard Kretzschmar, Anusch Peyman and Eugen Uhlmann	10011	Synthesis and duplex stability of oligodeoxynucleotides containing stereoregular or stereorandom octylphosphonate linkages
Christian Mück-Lichtenfeld and Hubertus Ahlbrecht	10025	On the reason for opposite diastereoselectivities of benzyllithium compounds containing lithium amide and lithium alkoxide functionalities
Ivo Pischel, Martin Nieger, Andreas Archut and Fritz Vögtle	10043	Chiral dithia[*n*]paracyclophanes—synthesis, crystal structure and chiroptical properties
Berthold Manz and Gerhard Maas	10053	Synthesis of 5-alkylidene-4,5-dihydro-3*H*-1,2,4(λ^3)-diazaphospholes from α-silyl-α-diazoketones and phosphaalkenes
Georg Pohnert and Wilhelm Boland	10073	Biosynthesis of the algal pheromone hormosirene by the freshwater diatom *Gomphonema parvulum* (Bacillariophyceae)
Marie-Claude Roux, Lya Wartski, Martine Nierlich and Monique Lance	10083	Enantioselective synthesis of unsubstituted and 3-substituted-4-aroyl-δ-lactones. Easy way to enantiopure bicyclic lactone systems
Georges Morel, Evelyne Marchand, Jean-Paul Pradère, Loic Toupet and Sourisak Sinbandhit	10095	2-Aza-1,3-dienes with electron-releasing substituents at the 1,3 positions. Reagents for the construction of pyridine and pyrimidine derivatives
Tuyet Jeffery	10113	On the efficiency of tetraalkylammonium salts in Heck-type reactions
Wei Huang, Jian Pei, Bingzi Chen, Weiwei Pei and Xiulin Ye	10131	A novel improved procedure for the synthesis of oxazoles
M.-Pia Calcagno, Francisco Camps, Josep Coll, Enric Melé and Francisco Sánchez-Baeza	10137	New phytoecdysteroids from roots of *Ajuga reptans* varieties
Hanafi H. Zoorob, Mohamed M. Abou-El Zahab, Mamdouh Abdel-Mogib and Mohamed A. Ismail	10147	Peculiar reaction behaviour of barbituric acid derivatives towards aromatic amines
Denise McKinnell, Ivan Basnak, Thomas A. Hamor, Neil Spencer, Peter R. Ashton and Richard T. Walker	10159	The synthesis, structure and properties of a 1,2-dihydropyrimidin-2-one formed by UV irradiation of 5-*t*-butyl-1-methyluracil
Le Thanh Giang, József Fetter, Károly Lempert, Mária Kajtár-Peredy and Ágnes Gömöry	10169	Simple and condensed β-lactams—XXVII. Reaction of 1-(4-methoxyphenyl)-4-(tetrazol-5-yl)azetidin-2-one and 1-(4-methoxyphenyl)-5-(tetrazol-5-ylmethyl)pyrrolidin-2-one with cerium(IV) ammonium nitrate (CAN)
Parviz Gharagozloo, Masao Miyauchi and Nigel J. M. Birdsall	10185	3-(Tetrahydropyridinyl)indoles
Brian Beagley, Nicholas C. Edge, Nongnuj Jaiboon, Jeffrey J. James, Charles A. McAuliffe, Marc S. Thorp, Michael Watkinson, Andrew Whiting and David C. Wright	10193	MM2 force field parameterisation, modelling and structure prediction of salen-type monomeric and hydrogen bonded dimeric manganese complexes
Maurizio Botta, Marcello Crucianelli, Raffaele Saladino, Cristina Mozzetti and Rosario Nicoletti	10205	Studies on the reactivity of cephalosporins—VI. Ozonolysis of Δ^2-cephem derivatives as a new entry to highly functionalized 2-oxoazetidine and 2-oxoazetidine-4-sulfenic acid derivatives
Donovan Green, Said Elgendy, Geeta Patel, Jehan A. Baban, Emmanuel Skordalakes, Wahid Husman, Vijay V. Kakkar and John Deadman	10215	The facile synthesis of *O,O*-dialkyl α-halobenzylphosphonates from *O,O*-dialkyl α-hydroxybenzylphosphonates
Sandro Cacchi, Giancarlo Fabrizi, Fabio Marinelli, Leonardo Moro and Paola Pace	10225	Palladium-catalysed hydroarylation and hydrovinylation of 3,3-dialkoxy-1-aryl-1-propynes. An approach to 3-aryl- and 3-vinylquinolines

Angelo Alberti, Maria A. Della Bona, Dante Macciantelli, Francesca Pelizzoni, Guido Sello, Giangiacomo Torri and Elena Vismara	10241	Reactivity of glucosyl radical in the presence of phenols
Rudong Shan, Heidrun Anke, Marc Stadler and Olov Sterner	10249	Papyracillic acid, a new penicillic acid analogue from the ascomycete *Lachnum papyraceum*
Tadeusz Marek Krygowski and Michał Cyranski	10255	Separation of the energetic and geometric contributions to the aromaticity—IV. A general model for the π-electron systems
	I	Instructions to Contributors

NUMBER 31

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
	10265	Corrigendum
Xavier Herault and Edward Mc Nelis	10267	Ring expansions of 1-haloethynyl-2-methylcyclopentanols
Francis M. Rossi, Evan T. Powers, Richard Yoon, Liliana Rosenberg and Jerrold Meinwald	10279	Preparation of 2,3-diamino acids: stereocontrolled synthesis of an aminated analog of the taxol side chain
Derek H. R. Barton and Béatrice M. Chabot	10287	The selective functionalization of saturated hydrocarbons—XXXIII. Further reactions which take place in the Fe^{II}–Fe^{IV} manifold
Derek H. R. Barton, Béatrice M. Chabot and Bin Hu	10301	The functionalization of saturated hydrocarbons—XXXIV. A study on the mechanism of Tempo trapping in Gif-type systems
Derek H. R. Barton and Bin Hu	10313	The functionalization of saturated hydrocarbons—XXXV. On the intermediates in an Fe^{III} catalase model in pyridine. Relevance to the catalase enzyme
James B. McAlpine, Lester A. Mitscher, Marianna Jackson, Ronald R. Rasmussen, David Vander Velde and Eduardo Veliz	10327	The biosynthesis of coloradocin
Choji Kashima, Iwao Fukuchi, Katsumi Takahashi and Akira Hosomi	10335	Enantiomerically enriched preparation of enolizable β-keto amides. Diastereoselective α-acylation and subsequent aminolysis of 2-acyl-3-phenyl-*l*-menthopyrazoles
Masahiro Toyota, Youichi Nishikawa and Keiichiro Fukumoto	10347	Synthesis of a cancer growth-inhibiting diterpene—stereoselective formal synthesis of (+)-aphidicolin
Hideo Nemoto, Junji Miyata and Keiichiro Fukumoto	10363	A novel and general route to diverse A-ring aromatic trichothecanes via cyclobutanes
Hisashi Fujihara, Hisatomo Mima and Naomichi Furukawa	10375	New cyclic dichalcogenonio-selenuranes induced by transannular multichalcogenides participation
Rolf Gleiter and Joachim Ritter	10383	The palladium mediated conversion of 1,6-diazacyclodeca-3,8-diynes to 3,3'-bispyrroles. An unexpected reorganization of an alkyne π-system
Michael Kluge and Dieter Sicker	10389	Double diastereoselective glucosidation of cyclic hemiacetals: synthesis of the 1,4-benzoxazinone acetal glucosides GDIBOA and GDIMBOA from *Gramineae*
Waldemar Adam and Barbara Walther	10399	Multiple-photon chemistry in the benzophenone photoreduction during laser-jet photolysis: effect of alcohol solvent on cross-coupling versus hydrogen abstraction of the electronically excited hydroxydiphenylmethyl radical
Philippe Compain, Jacques Goré and Jean-Michel Vatèle	10405	Palladium(II)-catalyzed formation of γ-butyrolactones from 4-trimethylsilyl-3-alkyn-1-ols: synthetic and mechanistic aspects

Ljubica Mojovic, Alain Turck, Nelly Plé, Muriel Dorsy, Bruno Ndzi and Guy Quéguiner	10417	Metalation of diazines—XVII. Very hindered bases as new metalating agents; improvement of regioselectivity for the metalation of 3-chloro-6-methoxypyridazine
Emile Bisagni, Corinne Landras, Sylvie Thirot and Christiane Huel	10427	A convenient way to dibenzo[*c,h*]-1,5-naphthyridines (11-aza-benzo[*c*]-phenanthridines)
Patricia Charpentier, Jean-François Brière, Georges Dupas, Guy Quéguiner and Jean Bourguignon	10441	Design and synthesis of a heterocyclic amine receptor
Didier Collomb, Bernard Chantegrel and Christian Deshayes	10455	Chemoselectivity in the rhodium(II) acetate catalysed decomposition of α-diazo-β-keto-γ,δ-alkenyl-δ-aryl compounds: aromatic C–H insertion reaction or Wolff rearrangement–electrocyclization
Claude Jacoby, Jean-Claude Braekman and Désiré Daloze	10473	Asymmetric synthesis of (2*R*)- and (2*S*)-2-iodohexadecanal, natural inhibitors of the thyroid gland metabolism
Abd El-Wareth A. O. Sarhan, Hasan A. H. El-Sherief and Abdalla M. Mahmoud	10485	A convenient one-pot synthesis of 2-benzimidazolyl-thioacetophenones and thiazolo[3,2-*a*]benzimidazoles
José Mª Quintela and Carlos Peinador	10497	A ready one-pot preparation for 7-oxa(or thia)-3,4,6-triazabenz[*d,e*]anthracene and 7-oxa-3,4,6,9-tetrazabenz[*d,e*]anthracene derivatives
Gonzalo Blay, Luz Cardona, Begoña García, Cristina L. García and José R. Pedro	10507	Ring-opening aminolysis of sesquiterpene lactones: an easy entry to bioactive sesquiterpene derivatives. Synthesis of (+)-β-cyperone and (–)-eudesma-3,5-diene from santonin
Belén Abarca, Rafael Ballesteros, Ana Muñoz and Gurnos Jones	10519	Triazolopyridines—XVII. N2-dicyanomethylides: synthesis, structure and reactivity with acetylenic dipolarophiles
Juan Manuel Villar, Antonio Delgado, Amadeu Llebaria, Josep M. Moretó, Elies Molins and Carles Miravitlles	10525	Asymmetric approaches to cyclopentenones in the Ni(0)-promoted cyclocarbonylation reaction of allyl halides and acetylenes
Roger Brettle, Richard Cross, Martyn Frederickson, Edwin Haslam, Fiona S. MacBeath and Gareth M. Davies	10547	The shikimate pathway—IX. Halogenation at C-3 of the shikimate nucleus
	I	Instructions to Contributors

NUMBER 32

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
Jean-Michel Vatèle and Stephen Hanessian	10557	Design and reactivity of organic functional groups—preparation and nucleophilic displacement reactions of imidazole-1-sulfonates (imidazylates)
James H. Rigby and Mary E. Mateo	10569	Total synthesis of (±)-α-lycorane and 4,5-dehydroanhydrolycorine
Youngwan Seo, Ki Woong Cho, Jung-Rae Rho, Jongheon Shin, Byoung-Mog Kwon, Song-Hae Bok and Jun-Im Song	10583	Solandelactones A–I, lactonized cyclopropyl oxylipins isolated from the hydroid *Solanderia secunda*
Yasuhiro Torisawa, Toshihiro Hosaka, Kiyoshi Tanabe, Naoko Suzuki, Yumiko Motohashi, Tohru Hino and Masako Nakagawa	10597	Synthesis of a tetracyclic substructure of manzamine A via the Diels–Alder reaction of dihydropyridinones
Yoshiki Morimoto, Fuyuhiko Matsuda and Haruhisa Shirahama	10609	Synthetic studies on virantmycin—I. Total synthesis of (±)-virantmycin and determination of its relative stereochemistry

Yoshiki Morimoto and Haruhisa Shirahama	10631	Synthetic studies on virantmycin—II. Total synthesis of unnatural (+)-virantmycin and determination of its absolute stereochemistry
Brunhilde Voigt, Andrea Porzel, Dieter Golsch, Waldemar Adam and Günter Adam	10653	Regioselective oxyfunctionalization of brassinosteroids by methyl(trifluoromethyl)dioxirane: synthesis of 25-hydroxy-brassinolide and 25-hydroxy-24-epibrassinolide by direct C–H insertion
Xuechao Wang, Xinfu Pan, Yuxin Cui and Yaozu Chen	10659	The first total synthesis of (±)-demethyl salvicanol
Antonio G. González, Nelson L. Alvarenga, Ana Estévez-Braun, Angel G. Ravelo and Rafael Estévez-Reyes	10667	Oxidation of natural targets by dimethyl dioxirane: regio and stereospecific reactions on enol double bond of bioactive nor quinone methide triterpenes
Apichart Suksamrarn, Siritorn Charoensuk and Boon-ek Yingyongnarongkul	10673	Synthesis and biological activity of 3-deoxyecdysteroid analogues
Artur Ryglowski and Paweł Kafarski	10685	Preparation of 1-aminoalkylphosphonic acids and 2-aminoalkylphosphonic acids by reductive amination of oxoalkylphosphonates
Luis R. Domingo, M. Teresa Picher, Juan Andrés, V. Moliner and V. S. Safont	10693	Theoretical study of the solvent effects on the mechanisms of addition of dimethyl acetylenedicarboxylate to 1-methyl-2-vinylpyrrole
Roberto Ballini, Giovanna Bosica and Enrico Marcantoni	10705	A new 1,4-elimination of benzenesulfinic acid from β-keto phenylsulphones via their tosylhydrazones
Tilmann W. Brandstetter, Carmen de la Fuente, Yong-ha Kim, Richard I. Cooper, David J. Watkin, Nikos G. Oikonomakos, Louise N. Johnson and George W. J. Fleet	10711	α-Azidoesters as divergent intermediates for combinatorial generation of glucofuranose libraries of novel N-linked glycopeptides
Tilmann W. Brandstetter, Carmen de la Fuente, Yong-ha Kim, Louise N. Johnson, Sarah Crook, Paul M. de Q. Lilley, David J. Watkin, Katerina E. Tsitsanou, Spyros E. Zographos, Enangelia D. Chrysina, Nikos G. Oikonomakos and George W. J. Fleet	10721	Glucofuranose analogues of hydantocidin
Yao-Zhong Xu	10737	Post-synthetic introduction of labile functionalities onto purine residues via 6-methylthiopurines in oligodeoxyribonucleotides
Demetrios Korakas, Athanasios Kimbaris and George Varvounis	10751	Synthesis of the novel pyrrolo[2,1-*d*][1,2,5]benzotriazepine, pyrrolo[2,1-*e*]-[1,3,6]benzotriazocine and pyrrolo[1,2-*a*]tetrazolo[1,5-*d*][1,4]benzodiazepine ring systems. A new route to pyrrolo[1,2-*a*]quinoxaline via transamination of *in situ* generated 1-(2-aminophenyl)-2-iminomethylpyrroles
María García-Valverde, Rafael Pedrosa, Martina Vicente, S. García-Granda and A. Gutiérrez-Rodríguez	10761	A diastereoselective approach to enantiopure 3-substituted pyrrolidines from masked lithium homoenolates derived from norephedrine
Inmaculada Robina, Eugenia López-Barba and José Fuentes	10771	Fatty acylamino-trisaccharides. Synthesis and some stereochemical properties
Mª Selma Arias-Pérez and Mª Jesús Santos	10785	An efficient approach to partially O-methylated α-D-mannopyranosides using bis-*tert*-butyldiphenylsilyl ethers as intermediates
Vincenzo Caló, Angelo Nacci and Vito Fiandanese	10799	Copper-mediated regio- and enantio-selective cross-coupling of heterocyclic allyl sulphides with organomagnesium compounds: a case of 1,7-relative stereogenesis

Ana Sánchez-Migallón, Antonio de la Hoz, Mikael Begtrup, Cristina Fernández-Castaño, Concepción Foces-Foces and José Elguero	10811	Porphyrins with four azole substituents in *meso* positions—II. X-Ray crystal structure of *meso*-tetrakis[1-[2-(trimethylsilyl)ethoxymethyl]pyrazol-5-yl]-porphyrin at 200 K
Florencio Zaragoza and Susanne Vejle Petersen	10823	Solid-phase synthesis of substituted 1,2,3-triazoles
	I	Instructions to Contributors

NUMBER 33

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
Stephen Hanessian, Jose J. Conde, Hoan Huynh Khai and Boliang Lou	10827	The stereocontrolled synthesis of 1,2-*trans* hexopyranosyl nucleosides via a novel anomeric activation
Mark B. Sassaman	10835	Indirect monoalkylation of primary and secondary amines by reductive decyanation of α-aminonitriles with sodium cyanoborohydride–mercury bis(trifluoroacetate)
Victor P. Kislyi, Kirill G. Nikishin, Elena Ya. Kruglova, Alexandr M. Shestopalov, Victor V. Semenov, Andrei A. Gakh and A. C. Buchanan, III	10841	Regioselective synthesis and S-derivatization reactions of 4- and 6-trifluoromethyl-3-cyano-2(1*H*)-pyridinethiones
Hideki Anan, Norio Seki, Osamu Noshiro, Kazuo Honda, Kenichi Yasumuro, Teruaki Ozasa and Nobuhiro Fusetani	10849	Total synthesis of cyclostellettamine C, a bispyridinium macrocyclic alkaloid having muscarinic acetylcholine receptor antagonistic activity
Thorsten Bach, Kai Jödicke and Birgit Wibbeling	10861	Reversal of the facial diastereoselectivity in the Paternò–Büchi reaction of silyl enol ethers carrying a chiral substituent in α-position
Haymo Ross and Ulrich Lüning	10879	Concave reagents—XIX. Synthesis, structure, and basicity of a calix-[6]arene bridged by an aniline
Dieter Hamprecht, Jakob Josten and Wolfgang Steglich	10883	Optically active 2*H*-azepines: synthesis and rearrangement into their 3*H*-isomers
Gérard Descotes, Jan Ramza, Jean-Marie Basset, Salvatore Pagano, Emmanuel Gentil and Joseph Banoub	10903	Synthesis and structural characterization of macrocyclic carbohydrate derivatives obtained from catalytic metathesis reaction with chloro-aryloxide complexes of tungsten
Jean-Marc Kern, Jean-Pierre Sauvage and Jean-Luc Weidmann	10921	Multiring interlocked systems via transition metal-templated strategy: the single-cyclization synthesis of [3]-catenates
Chen-Yu Cheng, Ling-Wei Hsin and Jing-Ping Liou	10935	Novel radical synthesis of morphine fragments spiro[benzofuran-3(2*H*),4'-piperidine] and octahydro-1*H*-benzofuro[3,2-*e*]isoquinoline
Huanfeng Jiang, Shengming Ma, Guoxin Zhu and Xiyan Lu	10945	Structural factors affecting the selectivities in the palladium(II) catalyzed cyclization of *N*-alkenyl-2-alkynamides
Ahmad R. Al Dulayymi and Mark S. Baird	10955	2-Vinyl-1,1,2-trihalocyclopropanes—valuable five carbon cyclopropane and cyclopropene synthetic intermediates
Paolo Bovicelli, Anna Sanetti and Paolo Lupattelli	10969	Fine regioselective tuning in the oxidation of *sec.sec* 1,2-diols by dimethyldioxirane
Bo-Long Poh	10979	Cyclodextrins (α-, β-, and γ-) as guests to calcichrome (calcion) in water
Gianna Reginato, Alessandro Mordini, Flavia Messina, Alessandro Degl'Innocenti and Giovanni Poli	10985	A new stereoselective synthesis of chiral γ-functionalized (*E*)-allylic amines

Maria Iorizzi, Simona De Marino, Luigi Minale, Franco Zollo, Valérie Le Bert and Christos Roussakis	10997	Investigation of the polar steroids from an Antarctic starfish of the family *Echinasteridae*: isolation of twenty-seven polyhydroxysteroids and steroidal oligoglycosides, structures and biological activities
Martin Belohradsky, Miloš Budešinsky, Jana Günterová, Jana Hodacová, Petr Holy, Jirí Závada, Ivana Císarová and Jaroslav Podlaha	11013	C–C Coupling reaction of 1,5-dibromo-2,6-dihydroxynaphthalene with alkali 2-naphthoxide. Opposite effects of counterion coordination and hydrogen bonding on stereoselectivity in the formation of *cis*- and *trans*-1,1':5',1"-ternaphthyls
Jan Epsztajn, Andrzej Józwiak, Jerzy K. Krysiak and Dariusz Łucka	11025	Application of organolithium and related reagents in synthesis—XVIII. Synthetic strategies based on aromatic metallation. A conversion of methyl *ortho*-pyridoylbenzoates into aza-anthra-5,10-quinones
Angelo Clerici, Laura Clerici and Ombretta Porta	11037	Acylation of a transient Ti(IV)-enolate by acyl halides and anhydrides. Facile synthesis of α-hydroxy-β-ketoesters
Carla Bisi Castellani, Oliviero Carugo, Manuel Giusti, Claudia Leopizzi, Angelo Perotti, Anna Gamba Invernizzi and Giovanni Vidari	11045	Scandium trifluoromethanesulphonate as an active catalyst in the decarbonylation of aromatic aldehydes
Csaba Szántay, Zsuzsanna Kardos-Balogh, István Moldvai, Csaba Szántay, Jr, Eszter Temesvári-Major and Gábor Blaskó	11053	A practical enantioselective synthesis of epibatidine
Javier Garín, Jesús Orduna, María Savirón, Martin R. Bryce, Adrian J. Moore and Vincent Morisson	11063	Synthesis and characterization of functionalized ethylenediselenotetrathiafulvalenes: a comparative study with their all-sulfur analogues
Pilar Cornago, Consuelo Escolástico, María Dolores Santa María, Rosa María Claramunt, Cristina Fernández-Castaño, Concepción Foces-Foces, Jean-Pierre Fayet and José Elguero	11075	Aromatic propellenes. Synthesis, X-ray structures and conformational study of polypyrazolylpyridines
Pieter A. Otten, Njord Oskam and Arne van der Gen	11095	A Horner–Wittig approach to *S,N*-ketene acetals. Acid-catalyzed hydrolysis of *S,N*-ketene acetals to (*S*)-thioesters
Luis R. Domingo, Salvador Gil, Ramón Mestres and M. Teresa Picher	11105	Theoretical model of solvated lithium dienediolates of methyl substituted 2-butenoic acids
	I	Instructions to Contributors

NUMBER 34

Contents

	iii	Tetrahedron Prize for Creativity in Organic Chemistry
	v	Contributors to this Issue
	vii	Graphical Abstracts
		TETRAHEDRON REPORT NUMBER 405
Senay Tascioglu	11113	Micellar solutions as reaction media
		ARTICLES
Hui-Yin Li, Spencer Drummond, Indawati DeLucca and George A. Boswell	11153	Singlet oxygen oxidation of pyrroles: synthesis and chemical transformations of novel 4,4-bis(trifluoromethyl)imidazoline analogs
Derek H. R. Barton and Giovanni Fontana	11163	The invention of radical reactions—XXXVII. A convenient radical synthesis of dialkyl diselenides from carboxylic acids

E. R. Marinelli, T. Arunachalam, G. Diamantidis, J. Emswiler, H. Fan, R. Neubeck, K. M. R. Pillai, T. R. Wagler, C.-K. Chen, K. Natalie, N. Soundararajan and R. S. Ranganathan	11177	Heterocyclic nonionic X-ray contrast agents—V. A facile conversion of 2-tetrahydrofuroamides into α-hydroxy-δ-valerolactams and a general synthesis of lactams conjugated to 2,4,6-triiodoisophthalamides
Patrick Meffre, Laurence Gauzy, Eric Branquet, Philippe Durand and François Le Goffic	11215	Synthesis of optically active β,γ-alkynylglycine derivatives
C. Alvarez-Ibarra, R. Cuervo-Rodríguez, M. C. Fernández-Monreal and M. P. Ruiz	11239	Synthesis and conformational study of β-hydroxy sulfones, bioisosteres of oxisuran metabolites, and their *O*-methyl derivatives
Patricia Carloni, Elisabetta Damiani, Lucedio Greci, Pierluigi Stipa, Giancarlo Marrosu, Rita Petrucci and Antonio Trazza	11257	Chemical and electrochemical study on the interactions of aminoxyls with superoxide anion
Ranjan Patra, Narayan C. Bar, Atanu Roy, Basudeb Achari, Nanda Ghoshal and Sukhendu B. Mandal	11265	A simple route to optically active, functionalized five-, six- and seven-membered carbocyclic derivatives
Dennis P. Piet, Maurice C. R. Franssen and Aede de Groot	11273	Biotransformation of allylically activated (*E,E*)-cyclodeca-1,6-dienols by *Cichorium intybus*
Barbara Cosimelli, Dario Neri and Gabrio Roncucci	11281	A new synthetic route to 2,2':5',2"-terthiophene-5-derivatives to conjugate with proteins and monoclonal antibodies
Bruno Danieli, Giordano Lesma, Marcello Luzzani, Daniele Passarella and Alessandra Silvani	11291	Diels–Alder reactions of methyl *N*-*p*-methoxybenzensulfonylindole-2-(2-propenoate), a convenient dienophile towards the synthesis of andranginine
Luiz Cláudio de A. Barbosa, Mayura M. M. Rubinger, John Mann and Howard L. Mansell	11297	New routes to polysubstituted cycloheptenones
Rafael Suau, Juan Manuel López-Romero, Rodrigo Rico, Francisco J. Alonso and Carolina Lobo	11307	A new approach to the synthesis of 4,5-dioxoaporphine alkaloids from preformed biaryl bond precursors
Jozef Kula, Magdalena Sikora, Halina Sadowska and Jacek Piwowarski	11321	Short synthetic route to the enantiomerically pure (*R*)-(+)-γ-decalactone
Mati Karelson, Uko Maran and Alan R. Katritzky	11325	Theoretical study of the keto–enol tautomerism in aqueous solutions
K. Aboutayab, S. Caddick, K. Jenkins, S. Joshi and S. Khan	11329	Preparation of organostannanes by intermolecular radical substitution reactions
Marko Zupan, Jernej Iskra and Stojan Stavber	11341	The regioselectivity in the fluorination of dibenzofuran, diphenylether and biphenyl with N–F type of reagents
Jesús Valenciano, Ana M. Cuadro, Juan J. Vaquero, José L. García-Navío, Julio Alvarez-Builla, Pilar Gómez-Sal and Avelino Martín	11349	Synthesis of new conjugated mesomeric betaines from alkoxycarbonylazinium salts
David Din Belle, Arto Tolvanen and Mauri Lounasmaa	11361	Total syntheses of tacamine-type indole alkaloids of *Tabernaemontana eglandulosa*
Sean T. Howard, Tadeusz Marek Krygowski and Marek L. Główka	11379	The imbalanced Kekulé structure contributions in the ring in 1,3,5-trisubstituted benzene derivatives: low temperature X-ray study on 1,3,5-trimethoxybenzene, and *ab initio* calculations on 1,3,5-triformylobenzene and trimethoxybenzene and the related disubstituted systems
	I	Instructions to Contributors

NUMBER 35

Contents

TETRAHEDRON SYMPOSIA-IN-PRINT NUMBER 62

CASCADE REACTIONS

DEDICATED TO PROFESSOR WOLFGANG OPPOLZER

Guest Editor: RON GRIGG

University of Leeds, Leeds, UK

	iii	Contributors to this Issue
	vii	Announcement: Tetrahedron Symposia-in-Print
	xiii	Obituary: Professor Wolfgang Oppolzer 1937–1996
	xv	Preface
	xvii	Graphical Abstracts
Dennis P. Curran, Hui Liu, Hubert Josien and Sung-Bo Ko	11385	Tandem radical reactions of isonitriles with 2-pyridonyl and other aryl radicals: scope and limitations, and a first generation synthesis of (±)-camptothecin
Louis Fensterbank, Anne-Lise Dhimane, Sashuang Wu, Emmanuel Lacôte, Stéphane Bogen and Max Malacria	11405	Variations on radical cascades of vinyl radicals generated from bromomethyldimethylsilyl propargyl ethers
Robert A. Batey, John D. Harling and William B. Motherwell	11421	Some novel electron transfer mediated cascade ring-opening reactions of bicyclo[4.1.0]ketones
W. Russell Bowman, Peter T. Stephenson and Adrian R. Young	11445	Cascade radical cyclisations of imines
Marcello Cavicchioli, Sylvie Decortiat, Didier Bouyssi, Jacques Goré and Geneviève Balme	11463	A new route to γ-arylidenebutyrolactones via a tandem carbopalladation–heterocyclisation sequence: a formal synthesis of U-68,215
Ronald Grigg, Vani Loganathan, Visuvanathar Sridharan, Paul Stevenson, Sukanthini Sukirthalingam and Tanachat Worakun	11479	Palladium catalysed tandem cyclisation–anion capture processes—II. Cyclisation onto alkynes or allenes with hydride capture
Kiah How Ang, Stefan Bräse, Arno G. Steinig, Frank E. Meyer, Amadeu Llebaria, Katharina Voigt and Armin de Meijere	11503	Versatile synthesis of bicyclo[4.3.0]nonenes and bicyclo[4.4.0]decenes by a domino Heck–Diels–Alder reaction
Christophe Copéret, Shengming Ma, Takumichi Sugihara and Ei-ichi Negishi	11529	Cyclic carbopalladation of alkynes terminated by carbonylative amidation
Hans Henniges, Frank E. Meyer, Ute Schick, Frank Funke, Philip J. Parsons and Armin de Meijere	11545	Palladium-catalysed oligocyclisations of 2-bromododeca-1,11-diene-6-ynes

Scott E. Denmark and C. B. W. Senanayake	11579	Tandem inter [4 + 2]/intra [3 + 2] cycloadditions—VIII. Cycloadditions with unactivated dipolarophiles
Edwin C. Davison, Ian T. Forbes, Andrew B. Holmes and Jacqueline A. Warner	11601	*N*-Alkenyl nitrone dipolar cycloaddition routes to piperidines and indolizidines—VIII. The scope of tandem reactions involving hydroxylamine–alkyne cyclisations
Leo A. Paquette, Lung Huang Kuo and Julien Doyon	11625	Reaction cascades based on squarate esters. 1,3-Dioxolane as a chaperone functional group for lithium ions
Philip J. Parsons, Nicholas P. Camp, J. Mark Underwood and Darren M. Harvey	11637	Tandem reactions of anions: a short and efficient route to ±anatoxin-*a*
Andreas Franz, Pierre-Yves Eschler, Manuel Tharin and Reinhard Neier	11643	The preparation and the cascade reactions of *N*-butadienyl-*N*-alkylketene *N,O-tert*-butyldimethylsilyl acetals
Ivar Ugi, Anton Demharter, Werner Hörl and Thomas Schmid	11657	Ugi reactions with trifunctional α-amino acids, aldehydes, isocyanides and alcohols
	I	Instructions to Contributors

NUMBER 36

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
Angela Cuenca and Adelitza Strubinger	11665	Synthesis of 2-(2-nitrophenoxy)quinoxaline and its basic hydrolysis in aqueous solutions of nonreactive counter ion surfactants with bulky head groups
Lorenzo Williams, Zhongda Zhang, Feng Shao, Patrick J. Carroll and Madeleine M. Joullié	11673	Grignard reactions to chiral oxazolidine aldehydes
Wenkui Lan McEldoon and David F. Wiemer	11695	Synthesis of nucleoside epoxyphosphonates
Jennifer M. Wiebe, Alain S. Caillé, Laird Trimble and Cheuk K. Lau	11705	Syntheses of quinolines, dihydro- and tetrahydroquinolines via *ortho*-quinone methide imine intermediate
Tsutomu Yokomatsu, Takehiro Yamagishi, Keita Matsumoto and Shiroshi Shibuya	11725	Stereocontrolled synthesis of hydroxymethylene phosphonate analogues of phosphorylated tyrosine and their conversion to monofluoromethylene phosphonate analogues
Toshiro Ibuka, Kazuo Nakai, Masako Akaji, Hirokazu Tamamura, Nobutaka Fujii and Yoshinori Yamamoto	11739	An aza-Payne rearrangement–epoxide ring opening reaction of 2-aziridinemethanols in a one-pot manner: a regio- and stereoselective synthetic route to diastereomerically pure N-protected 1,2-amino alcohols
Takashi Yamazaki, Takayuki Oniki and Tomoya Kitazume	11753	1,2- and 1,3-*O,O*-Silyl migration reactions of fluorine-containing monosilylated diols
G. Märkl, Th. Knott, P. Kreitmeier, Th. Burgemeister und F. Kastner	11763	Zur Molekülдynamik isomerer antiaromatischer [28]Tetraoxaporphyrinogene(6.0.6.0)—isomere [26]Tetraoxaporphyrin(6.0.6.0)dikationen
H. M. R. Hoffmann, Ira Münnich, Olaf Nowitzki, Holger Stucke and David J. Williams	11783	Samarium diiodide-mediated pinacolization of 1,4-diketones—I. Stereoselective synthesis of fused mono-, bi- and tricyclic cyclobutane-1,2-diols
Olaf Nowitzki, Ira Münnich, Holger Stucke and H. M. R. Hoffmann	11799	Samarium diiodide-mediated pinacolization of diketones—II. Synthesis of polycyclic frameworks containing a cyclobutane-1,2-diol and a cyclopentane-1,2-diol
Thierry J. Benvegnu, Loïc J. Toupet and René L. Grée	11811	Stereoselective synthesis of macrolactin A analogues—I. The C_7–C_{20} fragment

Thierry J. Benvegnu and René L. Grée	11821	Stereoselective synthesis of macrolactin A analogues—II. The C_1–C_{14} fragment
María M. Afonso, Horacio Mansilla, J. Antonio Palenzuela and Antonio Galindo	11827	Acid cyclization of 5-ketogermacren-6,12-olides. A reactivity and conformational study
Marcello Tiecco, Lorenzo Testaferri and Francesca Marini	11841	Stereoselective organoselenium-induced cyclization of *N*-allyl acethydrazides to 1,3,4-oxadiazines or *N*-acetyl pyrazolidines
Gianluigi Broggini, Franco Folcio, Nicola Sardone and Gaetano Zecchi	11849	Relative and absolute stereocontrol in intramolecular nitrone cycloadditions to the cyclohexene ring
Romualdo Caputo, Luigi Longobardo, Giovanni Palumbo, Silvana Pedatella and Federico Giordano	11857	Asymmetric induction in the coupling of 5,6-dihydro-1,4-dithiins with chiral aldehydes. A new synthetic approach to polyhydroxylated compounds
Harald Paulussen, Peter Adriaensens, Dirk Vanderzande and Jan Gelan	11867	Unexpected rearrangements in the synthesis of arylidene- or alkylidene-2-thiophthalides
Gianluca Pozzi, Stefano Banfi, Amedea Manfredi, Fernando Montanari and Silvio Quici	11879	Towards epoxidation catalysts for fluorous biphase systems: synthesis and properties of two Mn(III)-tetraarylporphyrins bearing perfluoroalkylamido tails
Peter R. Carly, Steven L. Cappelle, Frans Compernolle and Georges J. Hoornaert	11889	Diels–Alder reactions of pyridine *o*-quinodimethane analogues generated from functionalised *o*-bis(chloromethyl)pyridines
Jolanda M. I. Neeft, Jan Verweij, Hans G. J. Hirs and Erik de Vroom	11905	Cephalosporanic acid 7β-alkylideneammonio salts
Fatima Al-Omran, Mervat Mohammed Abdel Khalik, Hanan Al-Awadhi and Mohammed Hilmy Elnagdi	11915	Reactivity of condensed thiophenes in the Diels–Alder reaction: the reactivity of 3-aminothieno[3,4:3',4']benzo[*b*]pyranone, 3-aminothieno[3,4-*c*]quinoline and of 5-amino-7-substituted thieno[3,4-*d*]pyridazinone toward electron-poor olefins and acetylenes
Carlos Alvarez-Ibarra, Rocío Fernández-Granda, María L. Quiroga, J. M. Pingarrón and M. Pedrero	11929	Determination of the pK_a values for polycationic species derived from 9-hydroxy and 9-aminothiazolo[5,4-*b*]quinolines. A problem related to the tautomerism of these systems
David E. Justice and John R. Malpass	11947	Synthesis of *exo*- and *endo*-7,8-epoxyhomotropanes
David E. Justice and John R. Malpass	11963	Synthesis of *exo*- and *endo*-6,7-epoxytropanes
David E. Justice and John R. Malpass	11977	Total synthesis of scopine, pseudoscopine, and nor- derivatives
Mihailo Lj. Mihailovic, Milica M. Rajkovic, Ljubinka B. Lorenc, Vladimir D. Pavlovic, Aleksandar Ž. Milovanovic, Bernard Tinant and Jean-Paul Declercq	11995	Structure–reactivity relationship in 19-methyl- and 19-nor-5,10-secosteroids—IV. Intramolecular nitrone 1,3-dipolar cycloadditions
Giovanni Desimoni, Giuseppe Faita, PierPaolo Righetti and Gianfranco Tacconi	12009	Catalysis with inorganic cations—V. Intramolecular hetero Diels–Alder versus ene reactions: effect of magnesium perchlorate on chemoselectivity
Giovanni Desimoni, Giuseppe Faita, PierPaolo Righetti and Nicola Sardone	12019	Catalysis with inorganic cations—VI. The effect of chiral bis-oxazoline–magnesium perchlorate catalysts on chemo- and enantioselectivity of intramolecular hetero Diels–Alder and ene reaction
Isabel Fernández, José R. Pedro and Roberto de la Salud	12031	Aerobic catalytic epoxidation of unfunctionalized olefins using a new (salen)manganese(III) complex bearing a sesquiterpene salicylaldehyde derivative
	I	Instructions to Contributors

NUMBER 37

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
William H. Pearson and Brian M. Gallagher	12039	The intramolecular Schmidt reaction of azides with tertiary alcohols: synthesis of 5-(α-naphthyl)- and 5-(β-naphthyl)indolizidines as potential dopamine analogs and non-opiate antinociceptive agents
Bao-Xiang Zhao, Yang Yu and Shoji Eguchi	12049	Synthesis of stable Δ^4-isoxazolines by 1,3-dipolar cycloaddition of 3,4-dihydroisoquinoline *N*-oxides with alkynes and their rearrangement to isoquinoline-fused pyrroles
Ken Usami and Minoru Isobe	12061	Low-temperature photooxygenation of coelenterate luciferin analog. Synthesis and proof of 1,2-dioxetanone as luminescence intermediate
Takahiro Oka, Kenshu Fujiwara and Akio Murai	12091	Synthesis of both enantiomers of the BC-ring part of ciguatoxin
Gweon Il Hwang, Jae-Ho Chung and Won Koo Lee	12111	An efficient synthesis of both enantiomers of cathinone by regioselective reductive ring opening of substituted aziridines
Bong Chan Kim and Won Koo Lee	12117	Highly diastereoselective reduction of enantiomerically pure aziridino ketones
Kazuyuki Miyashita, Hideto Miyabe, Chiaki Kurozumi, Kuninori Tai and Takeshi Imanishi	12125	α-Alkylation of α-amino esters by using a pyridoxal model compound having a Li^+-ionophore character
En Si Wang, Yuen Min Choy and Henry N. C. Wong	12137	Synthetic studies on prehispanolone and 14,15-dihydroprehispanolone
Xiao-xia Wang, Hideyuki Shigemori and Jun'ichi Kobayashi	12159	Taxuspines Q, R, S, and T, new taxoids from Japanese yew *Taxus cuspidata*
Hajime Maeda, Nobuaki Kambe, Noboru Sonoda, Shin-ichi Fujiwara and Tsutomu Shin-Ike	12165	Reaction of 2,6-xylyl isoselenocyanate with organolithium compounds
Toshio Honda, Shin-ichi Yamane, Fumihiro Ishikawa and Miho Katoh	12177	A concise enantiospecific synthesis of (–)-invictolide
Thomas Heiner, Sergei I. Kozhushkov, Mathias Noltemeyer, Thomas Haumann, Roland Boese and Armin de Meijere	12185	Intramolecular Diels–Alder reactions of furans with a merely strain-activated tetrasubstituted alkene: bicyclopropylidene
Andreas Lutz, Thomas R. Ward and Martin Albrecht	12197	Synthesis of salicylamide and bipyridine containing ligands for iron(II) and iron(III) coordination
Iuliana E. Pop, Christophe F. Dhalluin, Benoît P. Déprez, Patricia C. Melnyk, Guy M. Lippens and André L. Tartar	12209	Monitoring of a three-step solid phase synthesis involving a Heck reaction using magic angle spinning NMR spectroscopy
Shyamaprosad Goswami, Kumaresh Ghosh and Swagata Dasgupta	12223	Molecular recognition: connection and disconnection of hydrogen bonds, a case study with dimeric and highly associated monocarboxylic acids with simple receptors
Giuseppe Capozzi, Paola Fratini, Stefano Menichetti and Cristina Nativi	12233	α-Oxosulfines—I. Reactivity of α-oxosulfines obtained from retro Diels–Alder reaction of 1,4-oxathiin-*S*-oxides
Giuseppe Capozzi, Paola Fratini, Stefano Menichetti and Cristina Nativi	12247	α-Oxosulfines—II. The first example of *ortho*-thioquinone-*S*-oxides
Ikuo Funaki, Roel P. L. Bell, Lambertus Thijs and Binne Zwanenburg	12253	Synthesis of functionalized cyclopropanes by MIRC reactions of aziridinyl-methylenemalonates

Christian Sund, Nitin Puri and Jyoti Chattopadhyaya	12275	Synthesis of *C*-branched spermine tethered oligo-DNA and the thermal stability of the duplexes and triplexes
Sangeeta V. Pitre, Padma S. Vankar and Yashwant D. Vankar	12291	Palladium catalysed conversion of vinyl bromo allylic alcohols into vinylic carbonyl compounds and oxidation of secondary alcohols to ketones
Atanas P. Venkov and Ilian I. Ivanov	12299	Synthesis of isoquinolines from 2-phenylethylamines, amides, nitriles and carboxylic acids in polyphosphoric acid
Javier G. Luis, El Hassane Lahlou and Lucía S. Andrés	12309	Hassananes: C_{23} terpenoids with a new type of skeleton from *Salvia apiana* Jeps
Pieter S. van Heerden, Barend C. B. Bezuidenhoudt and Daneel Ferreira	12313	Tetramethylethylene diamine/trimethylsilyl chloride mediated addition of benzyl copper reagents to α,β-unsaturated esters
César Raposo, Alicia Luengo, Marta Almaraz, Mercedes Martín, Mª Luisa Mussons, Mª Cruz Caballero and Joaquín R. Morán	12323	Malonic acid receptors with decarboxylative activity
	I	Instructions to Contributors

NUMBER 38

Contents

	iii	Contributors to this issue
	v	Graphical Abstracts
Yong Sun Park and Peter Beak	12333	Lithiation–substitutions of *N*-Boc *N*-alkyl cyclopropylamines
David V. Avila, Keith U. Ingold, J. Lusztyk, William R. Dolbier, Jr and H.-Q. Pan	12351	Perfluoro-*tert*-butyl, a reactive, neutral, electrophilic carbon-centered radical *par excellence*
David A. Williamson and Bruce E. Bowler	12357	Synthesis of a beta-turn-forming depsipeptide for hydrogen bond mediated electron transfer studies
Wei-min Zhao, Guo-wei Qin, Ren-Zhou Yang, Tian-Yi Jiang, Wu-Xiong Li, Lincoln Scott and John K. Snyder	12373	Tonkinenin A. A new polyoxygenated cyclohexane derivative from *Uvaria tonkinensis*
Patrick H. Dussault, Todd A. Anderson, Michael R. Hayden, Kevin J. Koeller and Q. Jason Niu	12381	Auxiliary-directed peroxidation of 1,4-dienes
Pavel Lhoták, Masaru Kawaguchi, Atsushi Ikeda and Seiji Shinkai	12399	Synthesis of 'macrocycle of macrocycles' containing 3–8 calix[4]arene units. Unexpected generation of large super-macrocycles
Gaku Yamamoto, Hiroyuki Higuchi, Masami Yonebayashi, Yuki Nabeta and Juro Ojima	12409	Stereodynamics of *N,N*-dialkyl-9-triptycylamines
Hitoshi Tamiaki, Shinya Miyata, Yasuhiko Kureishi and Rikuhei Tanikaga	12421	Aggregation of synthetic zinc chlorins with several esterified alkyl chains as models of bacteriochlorophyll-*c* homologs
Vadim A. Soloshonok, Dimitry V. Avilov and Valery P. Kukhar	12433	Asymmetric aldol reactions of trifluoromethyl ketones with a chiral Ni(II) complex of glycine: stereocontrolling effect of the trifluoromethyl group
Siméon Arseniyadis, Dmitry V. Yashunsky, Rossimiriam Pereira de Freitas, Manuel Muñoz Dorado, Pierre Potier and Loïc Toupet	12443	Left- and right-half taxoid building blocks from (*S*)-(+)-Hajos–Parrish ketone
Ta-shue Chou and Chia-Tien Wang	12459	Ring-substituted thieno-*o*-quinodimethanes via electrophilic substitution reactions of thieno-3-sulfolene

Geoffrey T. Crisp and Markus G. Gebauer	12465	Heck couplings of nonactivated alkenes
Elena Tighineanu, Dan Raileanu, Yurii Simonov and Polina Bouros	12475	5*H*-Pyrrolo[1,2-*a*][3,1]benzoxazin-5-ones. Reconsideration of the double cyclisation of *o*-carboxyphenylglycine
Bogdan Boduszek	12483	The acidic cleavage of pyridylmethyl(amino)phosphonates. Formation of the corresponding amines
Subhas Chandra Roy and Pijus Kumar Mandal	12495	Synthesis of fused acetals by ceric ammonium nitrate mediated cycloaddition of 1,3-dicarbonyl compounds to cyclic enol ethers
Ana M. Costero, Cecilia Andreu, Elena Monrabal, Amparo Tortajada, Luis E. Ochando and José M. Amigó	12499	Allosteric behaviour of a bis-cyclic crown ether derived from biphenyl
Juma'a R. Al Dulayymi, Mark S. Baird, Michael J. Simpson, Susan Nyman and Gordon R. Port	12509	Structure based interference with insect behaviour—cyclopropene analogues of pheromones containing *Z*-alkenes
Helena McAlonan, James P. Murphy, Paul J. Stevenson and Alan B. Treacy	12521	Oxidation of *N*-(4-methoxybenzyl)-2-pyrrolidinones to *N*-(4-methoxybenzoyl)-2-pyrrolidinones. Rapid entry to optically active aniracetam analogues
Kristof J. Dubois, Christine C. Fannes, Suzanne M. Toppet and Georges J. Hoornaert	12529	Generation of polysubstituted 2-pyridinecarboxylic acid derivatives from the reaction of (functionalised) 2-oxa-5-azabicyclo[2.2.2]oct-5-en-3-ones with various nucleophiles
Iain Coldham and Richard Hufton	12541	Synthesis of 3-alkylpyrrolidines by anionic cyclization
Zhong-Wu Guo and Aleksander Zamojski	12553	Elaboration of the acyl ligand in complex $(\eta^5\text{-}C_5H_5)Fe(CO)(PPh_3)(COCH_2Ph)$
Giuseppe Alvaro, Diego Savoia and Maria R. Valentinetti	12571	Diastereoselective addition of methyllithium and dimethylcuprate–boron trifluoride to imines derived from (*S*)-1-phenylethylamine
Annalisa Tait, Stefano Ganzerli and Maria Di Bella	12587	Synthesis and free radical scavenging activity of 4-(2*H*-1,2,4-benzothiadiazine-1,1-dioxide-3-yl)-2,6-bis(1,1-dimethylethyl)phenols
Anka Bojilova, R. Nikolova, Christo Ivanov, Nestor A. Rodios, A. Terzis and C. P. Raptopoulou	12597	A comparative study of the interaction of salicylaldehydes with phosphonoacetates under Knoevenagel reaction conditions. Synthesis of 1,2-benzoxaphosphorines and their dimers
Judith A. K. Howard, Vanessa J. Hoy, David O'Hagan and Garry T. Smith	12613	How good is fluorine as a hydrogen bond acceptor?
Apichart Suksamrarn and Boon-ek Yingyongnarongkul	12623	Synthesis and biological activity of 2-deoxy-20-hydroxyecdysone and derivatives
Giuseppe Guanti and Enrica Narisano	12631	Exploitation of highly functionalized epoxides derived from asymmetrized tris(hydroxymethyl)methane (THYM*) in the synthesis of a fragment of lasalocide A and other related polyether ionofore antibiotics
	I	Instructions to Contributors

NUMBER 39

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
Geun Sook Jeon and Vasu Nair	12643	New isomeric analogues of anti-HIV active azidonucleosides
Cheng-Bin Cui, Hideaki Kakeya and Hiroyuki Osada	12651	Novel mammalian cell cycle inhibitors, spirotryprostatins A and B, produced by *Aspergillus fumigatus*, which inhibit mammalian cell cycle at G2/M phase

Toshiyuki Takagi, Makoto Nakamoto, Kazuyuki Sato, Mayumi Koyama, Akira Ando and Itsumaro Kumadaki	12667	Synthesis of fluorine compounds using zinc complex of halothane
Werner Schroth, Simona Dunger, Frank Billig, Roland Spitzner, Rainer Herzschuh, Almut Vogt, Thomas Jende, Gunter Israel, Jens Barche, Dieter Ströhl and Joachim Sieler	12677	1,2-Dithiines and precursors—XVI. Synthesis, structure, and reactivity of non-anellated 1,2-dithiines
Karl-Heinz Altmann, Rudolf Kesselring and Uwe Pieles	12699	6'-Carbon-substituted carbocyclic analogs of 2'-deoxyribonucleosides—synthesis and effect on DNA/RNA duplex stability
Thomas Staroske, Lothar Hennig, Peter Welzel, Hans-Jörg Hofmann, Dietrich Müller, Thomas Häusler, William S. Sheldrick, Stefan Zillikens, Britta Gretzer, Hermann Pusch, Helfried G. Glitsch	12723	Synthesis and pharmacological properties of cardenolides substituted at the butenolide part
Claudia Birk and Jürgen Voss	12745	C,C-Coupling with sulfur-stabilized carbanions—VI. Preparation and electrophilic substitution of 1-[3-methyl-2-(2-thiolanylthio)butyl]piperidine and dethioacetalization of semicyclic dithioacetals
Olav Goj, Sirpa Kotila and Günter Haufe	12761	Convenient routes to 2-aryl-2-fluoropropionic acids: synthesis of monofluorinated analogues of (±)-ibuprofen, (±)-naproxen and related compounds
U. S. Chowdhury	12775	Synthesis of a versatile tetrasaccharide of sialyl Le^x and Le^x antigens
Ion Grosu, Sorin Mager, Gerard Plé and Eugen Mesaros	12783	Synthesis and stereochemistry of some dispiro-1,3-dioxanes with axial and helical chirality
Robert S. Ward, Andrew Pelter, Mark I. Edwards and Jeremy Gilmore	12799	Asymmetric synthesis of a lignan lactone from a *meso* anhydride
Norbert De Kimpe and Wim Aelterman	12815	An efficient synthesis of (*S*)-(+)-manicone, an alarm pheromone of *Manica* ants
Gábor Németh, Rita Kapiller-Dezsofi, Györgyi Lax and Gyula Simig	12821	New practical synthesis of panomifene. The effect of 2-trifluoromethyl substituent on the stereoselectivity of dehydration of 1,1,2-triarylethanols
Maria Letizia Ciavatta, Margherita Gavagnin, Raffaella Puliti, Guido Cimino, Eugenia Martinez, Jesus Ortea and Carlo Andrea Mattia	12831	Dolabriferol: a new polypropionate from the skin of the anaspidean mollusc *Dolabrifera dolabrifera*
Norio Shibata, Jack E. Baldwin, Adam Jacobs and Mark E. Wood	12839	Electrophilic sulfenylation in a stereocontrolled synthesis of protected (2*R*,3*R*)-3-mercaptoaspartic acid from L-aspartic acid
	I	Instructions to Contributors

NUMBER 40

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
		TETRAHEDRON REPORT NUMBER 406
Peter Wipf and Heike Jahn	12853	Synthetic applications of organochlorozirconocene complexes
		ARTICLES
Alejandro P. Nin, Rosa M. de Lederkremer and Oscar Varela	12911	Synthesis of (2*S*,4*R*,5*R*)-4,5,6-trihydroxynorleucine and 5-hydroxynorvaline from precursors obtained by an unusual rearrangement in a 5,6-dihydro-2-pyrone

Albert Kascheres and Reinaldo A. F. Rodrigues	12919	Intramolecular interception of reactive intermediates in the Raney nickel 'generated *in situ*' reduction of oximes. Synthetic and mechanistic implications
Masayuki Takeuchi, Kazuya Koumoto, Masahiro Goto and Seiji Shinkai	12931	Efficient glucoside extraction mediated by a boronic acid with an intramolecular quaternary ammonium ion
Helena Dodziuk	12941	The classification scheme of isomers of organic molecules
José M. García Fernández, Carmen Ortiz Mellet, Víctor M. Díaz Pérez, José L. Jiménez Blanco and José Fuentes	12947	Conformational energetics of sugar thioureas and synthesis of glycosyl thioureido sugars
Gert A. Barf, Dennis van den Hoek and Roger A. Sheldon	12971	Ruthenium-catalyzed epoxidation of unfunctionalized olefins with *tert*-butyl hydroperoxide
Geir Andresen, Lise-Lotte Gundersen and Frode Rise	12979	Regiochemistry in addition of Grignard reagents to *N,N'*-dibenzylated 2-purinones
Valentine G. Nenajdenko, Ivan L. Baraznenok and Elizabeth S. Balenkova	12993	*N,N*-Dimethylacrylamide–triflic anhydride complex as a novel bifunctional electrophile in reaction with electron-rich aromatics
Giancarlo Cravotto, Giovanni B. Giovenzana, Massimo Sisti and Giovanni Palmisano	13007	Dehydrative alkylation of alcohols with triethyl methanetricarboxylate under Mitsunobu conditions
Caroline Dunn, Colin L. Gibson and Colin J. Suckling	13017	The synthesis of fluorine-containing pterins
Antonino Corsaro, Vito Librando, Ugo Chiacchio and Venerando Pistarà	13027	1,3-Dipolar cycloaddition reactions of polycyclic aromatic hydrocarbons with 3,5-dichloro-2,4,6-trimethyl- and 2,4,6-trimethylbenzonitrile oxide
Beatrice G. M. Burgaud, David C. Horwell, Allessandro Padova and Martyn C. Pritchard	13035	Regioselective nucleophilic ring opening reactions of 2,2-disubstituted aziridines—the asymmetric synthesis of α,α-disubstituted amino acids
	I	Tetrahedron Reports on Organic Chemistry
	XXIII	Instructions to Contributors

NUMBER 41

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
Georgiy B. Shul'pin, Mário C. Guerreiro and Ulf Schuchardt	13051	Oxidations by the reagent O_2–H_2O_2–vanadium complex–pyrazine-2-carboxylic acid—VII. Hydroperoxidation of higher alkanes
Moustapha Bah and Rogelio Pereda-Miranda	13063	Detailed FAB-mass spectrometry and high resolution NMR investigations of tricolorins A–E, individual oligosaccharides from the resins of *Ipomoea tricolor* (Convolvulaceae)
Michihiko Noguchi, Takashi Mizukoshi and Akikazu Kakehi	13081	A facile and stereoselective azepine-ring formation at the periphery of pyridone and pyrido[1,2-*a*]pyrimidone systems via intramolecular imine and carbonyl ene reactions
Michihiko Noguchi, Takashi Mizukoshi, Takehiko Uchida and Yoshiaki Kuroki	13097	Mechanistic considerations on the azepine-ring formation through the ene reactions at the periphery of heterocyclic systems
Michihiko Noguchi, Takashi Mizukoshi, Shinya Nakagawa and Akikazu Kakehi	13111	An asymmetry induced azepine-ring formation through the ene reactions at the periphery of heterocyclic systems

Tetsuo Iwagawa, Takahiro Masuda, Hiroaki Okamura and Munehiro Nakatani	13121	New xenia diterpenoids from a *Xenia* species of a soft coral
Hee Jae Shin, Hisashi Matsuda, Masahiro Murakami and Katsumi Yamaguchi	13129	Agardhipeptins A and B, two new cyclic hepta- and octapeptide, from the cyanobacterium *Oscillatoria agardhii* (NIES-204)
Kaori Ishimaru, Kazutaka Tsuru, Katsunori Yabuta, Makoto Wada, Yohsuke Yamamoto and Kin-ya Akiba	13137	Stereoselective synthesis of 1,2-amino alcohols by addition of organocuprate•BF_3 complexes and organolithium reagents to an α-silyloxyaldimine derived from (*S*)-ethyl lactate
Hirokazu Hosoyama, Akiko Inubushi, Takie Katsui, Hideyuki Shigemori and Jun'ichi Kobayashi	13145	Taxuspines U, V, and W, new taxane and related diterpenoids from the Japanese yew *Taxus cuspidata*
M. Schulz, R. Kluge, S. Liebsch, J. Lessig, M. Halik and F. Gadissa	13151	Diastereoselective epoxidation and bishydroxylation of cyclic *tert*-butyl allyl peroxides
Monika Seifert and Dietmar Kuck	13167	Naphtho-anellated [5.6.5]- and [6.5.5.5]fenestranes
Yao-Jung Chen, Chi-Ying Wang and Wen-Yuan Lin	13181	Radical cyclization of α-allenic ketone: a new approach to the synthesis of (±)-α-chamigrene
Zong-chia Ho, Ming-chung Ku, Chun-mei Shu and Lee-gin Lin	13189	*p*-Triallylcalix[4]arene: the final member of the *p*-allylcalix[4]arenes
Jacek Gawronski, Franciszek Kazmierczak, Krystyna Gawronska, Pawel Skowronek, Jacek Waluk and Jan Marczyk	13201	Exciton coupling in various substituted aryl-phthalimide bichromophoric systems
Benito Alcaide, Luis Casarrubios, Gema Domínguez, Angel Retamosa and Miguel A. Sierra	13215	Reactions of stabilized sulfur ylides with α,β-unsaturated alkoxychromium-carbene complexes
Attilio Citterio, Roberto Sebastiano, Antonietta Maronati, Fabio Viola and Alessandra Farina	13227	Oxidative dimerization of diethyl 3-thienylmalonate by high valent metal salts. Synthesis of benzo[1,2-*b*:4,5-*b'*]dithiophene derivatives
Fernando F. Huerta, Cecilia Gómez and Miguel Yus	13243	DTBB-Catalysed lithiation of 4-functionalised 1-chloro-2-butenes
Anna Barbieri, Pier Carlo Montevecchi, Daniele Nanni and Maria Luisa Navacchia	13255	LDA-Promoted decomposition of benzenesulfenamides. A route to aminyl radicals by dioxygen oxidation of lithium amides
	I	Instructions to Contributors

NUMBER 42

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
		TETRAHEDRON REPORT NUMBER 407
Carl H. Schiesser and Lisa M. Wild	13265	Free-radical homolytic substitution: new methods for formation of bonds to heteroatoms
		ARTICLES
Shunya Takahashi, Hiroyuki Terayama and Hiroyoshi Kuzuhara	13315	Synthetic studies on a potential endoglycosidase inhibitor: chemical conversion of *N,N'*-diacetylchitobiose into a pseudodisaccharide containing 2-acetamido-1,2-dideoxynojirimycin
Toshihiko Onoda, Ryuichi Shirai, Nobuyuki Kawai and Shigeo Iwasaki	13327	Efficient asymmetric synthesis of *cis*-2-methylcyclopropanecarboxylic acid

Hideo Nemoto, Motohiro Shiraki, Natsuko Yamada, Naomi Raku and Kelichiro Fukumoto	13339	A sequenced radical reaction—a novel stereocontrolled route to angularly disubstituted *cis*-decalins
Noriyasu Kato and Norio Miyaura	13347	A stereoselective synthesis of 1,2-diarylethenyl ethyl ethers via the carbocupration–cross coupling sequence
Kenso Soai, Yukikazu Inoue, Tomohide Takahashi and Takanori Shibata	13355	Asymmetric synthesis of chiral diols by the catalytic enantioselective dialkylation of tere-, iso-, and phthalaldehydes, and by a catalytic enantioselective autoinductive reaction
Satoshi Shimizu, Sei-ichi Nakamura, Masahisa Nakada and Masakatsu Shibasaki	13363	Total synthesis of (+)-tautomycin
Gerhard Bringmann, Wael Saeb, Dagmar Koppler and Guido François	13409	Jozimine A ('dimeric' dioncophylline A), a non-natural michellamine analog with high antimalarial activity
Gerhard Bringmann, Roland Götz and Guido François	13419	Synthesis of pindikamine A, a michellamine-related dimer of a non-natural, 'skew' naphthylisoquinoline
Paul J. Harradine, Torren M. Peakman and James R. Maxwell	13427	Triterpenoid chlorin esters: water column transformation products of chlorophyll *a*
Ronald Grigg and José M. Sansano	13441	Sequential hydrostannylation–cyclisation of δ- and ω-allenyl aryl halides. Cyclisation at the proximal carbon
H. Ali Dondas, Ronald Grigg and Mark Thornton-Pett	13455	Spiro(pyrrolidinyl-2,3'-benzodiazepines) related to MK-329
Aristea V. Bayquen and Roger W. Read	13467	Total synthesis of micropine and epimicropine
Subodh Kumar, Navneet Kaur and Harjit Singh	13483	Synthetic ionophores—XIV. Effect of pyridine and thioether ligating units on Ag^+ selectivity in 18-membered diamide–diester macrocycles
Luca Banfi, Giuseppe Guanti and Renata Riva	13493	Enantio- and diastereoselective synthesis of the AB ring system of aklavinone by coupling a chemoenzymatic procedure with organometal chemistry
Francesco Babudri, Vito Fiandanese, Giuseppe Marchese and Angela Punzi	13513	A general and straightforward approach to α,ω-ketoesters
Takatoshi Matsumoto, Toyohiko Aoyama and Takayuki Shioiri	13521	Reaction pathway for epimerization of tilivalline
Alicia Dobarro and Dolores Velasco	13525	Synthesis of β,γ-unsaturated *N*-acyl-2-oxazolidinones
	I	Instructions to Contributors

NUMBER 43

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
Alan P. Marchand, Hyun-Soon Chong, Rajesh Shukla, G. V. M. Sharma, Kalpenchery A. Kumar, Umesh R. Zope and Simon G. Bott	13531	Acid and base promoted rearrangements of hexacyclo[11.2.1.$0^{2,12}$.$0^{5,10}$.$0^{5,15}$.$0^{10,14}$]hexadeca-6,8-diene-4,11-dione
Frank Schröder, Stephan Franke, Wittko Francke, Horst Baumann, Manfred Kaib, Jacques M. Pasteels and Désiré Daloze	13539	A new family of tricyclic alkaloids from *Myrmicaria* ants

Philippe Ohier, Adam Daïch and Bernard Decroix	13547	Pyrrolo[1,4]diazepines, via thermolysis of carbonyl azides, and [3,2,2]-cyclazines, via Diels–Alder reaction of [*f*]indolizines, annelated to [1]-benzothiophene
Gérard Jenner	13557	Comparative study of physical and chemical activation modes. The case of the synthesis of β-amino derivatives
Martine Perrée-Fauvet, Catherine Verchère-Béaur, Eric Tarnaud, Gilles Anneheim-Herbelin, Nathalie Bône and Alain Gaudemer	13569	New amino acid porphyrin derivatives—I. Synthesis
Catherine Verchère-Béaur, Martine Perrée-Fauvet, Eric Tarnaud, Gilles Anneheim-Herbelin, Nathalie Bône and Alain Gaudemer	13589	New amino acid porphyrin derivatives—II. DNA binding studies
Loïk Viallon, Olivia Reinaud, Patrice Capdevielle and Michel Maumy	13605	Thermal and acid-catalysed sigmatropic rearrangements of allylamino-methoxy-1,2-benzoquinones
Ping-Shu Chen and Chin-Hsing Chou	13615	Pyrolytic chemistry of thenyl benzoates
Hashem Sharghi and Fatemeh Tamaddon	13623	$BeCl_2$ as a new highly selective reagent for dealkylation of aryl-methyl ethers
Gadi Rothenberg and Yoel Sasson	13641	Extending the haloform reaction to non-methyl ketones: oxidative cleavage of cycloalkanones to dicarboxylic acids using sodium hypochlorite under phase transfer catalysis conditions
Giovanni Desimoni, Giuseppe Faita and Mariella Mella	13649	A stereodivergent synthesis of chiral 4,5-disubstituted bis(oxazolines)
Nafizal Hossain, Jef Rozenski, Erik De Clercq and Piet Herdewijn	13655	Synthesis and antiviral activity of acyclic analogues of 1,5-anhydrohexitol nucleosides using Mitsunobu reaction
Pedro Molina, Enrique Aller, Angeles Lorenzo, Concepción Foces-Foces and Antonio L. Llamas Saiz	13671	An anomalous intramolecular conjugate addition of N-protected imidazoles to vinyliminophosphoranes promoted by tetrabutylammonium fluoride. X-Ray crystal structure of 5-ethoxycarbonyl-5-(triphenylphosphoranylidene-amino)-5,6-dihydroimidazo[2,1-*a*]isoquinoline
Piotr Bałczewski and Witold M. Pietrzykowski	13681	A free radical approach to functionalization of phosphonates utilizing novel 2- and 3-phosphonyl radicals
Graziano Baccolini, Athanase Munyaneza and Carla Boga	13695	An efficient procedure for the synthesis of *N*-alkenyl derivatives of six-membered and larger 1,2-diaza heterocycles
Matthew D. Cliff and Stephen G. Pyne	13703	Palladium catalysed coupling of imidazoles to alkynyl and vinyl substrates
Francesco Cafieri, Ernesto Fattorusso, Alfonso Mangoni and Orazio Taglialatela-Scafati	13713	Clathramides, unique bromopyrrole alkaloids from the Caribbean sponge *Agelas clathrodes*
Justo Cobo, Manuel Melguizo, Manuel Nogueras, Adolfo Sánchez, José A. Dobado and Marco Nonella	13721	A theoretical investigation on the reactivity of 6-amino-3-methylpyrimidin-4(3*H*)-ones towards DMAD. Tandem Diels–Alder retro Diels–Alder (DA/RDA) reaction
Alicia Dobarro and Dolores Velasco	13733	Synthesis of β,γ-unsaturated *N*-acyl-2-oxazolidinones
Diego J. Ramón and Miguel Yus	13739	Naphthalene-catalysed lithiation of carbamoyl and thiocarbamoyl chlorides under Barbier-type reaction conditions
Alex R. Khomutov, Jouko J. Vepsäläinen, Alexander S. Shvetsov, Tapani Hyvönen, Tuomo A. Keinänen, Vladimir N. Pustobaev, Terho O. Eloranta and Radii M. Khomutov	13751	Synthesis of hydroxylamine analogues of polyamines
Braulio M. Fraga, Pedro González, Ricardo Guillermo and Melchor G. Hernández	13767	A study of the microbiological reduction of α,β-unsaturated carbonyl *ent*-kaurenes by *Gibberella fujikuroi*

Roberto Pagliarin, Gianluca Papeo, Guido Sello, Massimo Sisti and Lino Paleari 13783 Design of β-amino alcohols as chiral auxiliaries in the electrophilic amination of 1,3,2-oxazaphospholanes

Michał Cyrański and Tadeusz Marek Krygowski 13795 Separation of the energetic and geometric contributions to the aromaticity of π-electron carbocyclics—V. Analysis of the aromatic character of aza-analogues of benzenoid hydrocarbons

I Instructions to Contributors

NUMBER 44

Contents

iii Contributors to this Issue

v Graphical Abstracts

TETRAHEDRON REPORT NUMBER 408

Philippe Remuzon 13803 *trans*-4-Hydroxy-L-proline, a useful and versatile chiral starting block

ARTICLES

Youssef L. Bennani and Stephen Hanessian 13837 The asymmetric synthesis of α-substituted α-methyl and α-phenyl phosphonic acids: design, carbanion geometry, reactivity and preparative aspects of chiral alkyl bicyclic phosphonamides

Hiroyuki Ishibashi, Kazuya Kodama, Chisato Kameoka, Hirotaka Kawanami and Masazumi Ikeda 13867 Synthesis of 4-oxo-2-azetidineacetic acids by means of radical cyclization of *N*-vinylic α-bromo amides

Yoshikazu Iwasawa, Jun Shibata, Katsumasa Nonoshita, Sachie Arai, Hitoshi Masaki and Koji Tomimoto 13881 Stereoselective synthesis of J-104,118 and J-104,123, novel, potent inhibitors of squalene synthase

Chiho Kokubo and Tsutomu Katsuki 13895 Highly enantioselective catalytic oxidation of alkyl aryl sulfides using Mn–salen catalyst

Hirokazu Arimoto, Rieko Yokoyama, Kazuhiko Nakamura, Yasuaki Okumura and Daisuke Uemura 13901 Vallartanone B: synthesis and related studies

Masashi Eto, Toshihiro Uemura, Noriko Shimizu and Kazunobu Harano 13909 Sequential pericyclic reaction of unsaturated xanthates. Intramolecular cycloaddition selectivity of the 2,4-alkadienyl 2-alkenyl sulfides

Seiki Saito, Akiyoshi Kuroda, Hiroshi Matsunaga and Shushiro Ikeda 13919 Synthesis of chiral 3*E*,5*E*-octadiene-1,2*R*,7*R*,8-tetraol frameworks by means of palladium(II)-promoted hetero-Claisen rearrangement: mechanistic aspect

Toshihiro Murafuji, Ryota Mouri, Yoshikazu Sugihara, Katsuto Takakura, Yuji Mikata and Shigenobu Yano 13933 Structure of diethyl(2-pyridyl)boranes: rigid cyclic dimers

Hidenori Watanabe, Takeru Watanabe and Kenji Mori 13939 Enantioselective synthesis of the tricyclic furan moiety of azadirachtin, a potent insect antifeedant

Hisashi Fujihara, Hisatomo Mima and Naomichi Furukawa 13951 Preparation and structure of new diazaselenuranes. Transannular hypervalent bond between seleno and diamino groups

Masaaki Omote, Akira Ando, Toshiyuki Takagi, Mayumi Koyama and Itsumaro Kumadaki 13961 Synthesis of a fluorine analog of hematoporphyrin by ring closure

Francesco Ciminale, Luigi Lopez, Vincenza Paradiso and Angelo Nacci 13971 Aminium salts-induced dimerization of α-methylstyrene and 1-aryl-1-phenylethylenes. Solvent effect

Marina DellaGreca, Lucio Previtera, Antonio Fiorentino, Gabriele Pinto and Antonino Pollio 13981 Bioconversion of 17β-hydroxy-17α-methyl-androsta-1,4-dien-3-one and androsta-1,4-diene-3,17-dione in cultures of the green alga T76 *Scenedesmus quadricauda*

Mercedes Martín-Martínez, Rosario Herranz, Mª Teresa García-López and Rosario González-Muñiz	13991	Bicyclic lactams as templates for peptidomimetics. Studies on stereoselective synthetic routes to 6-oxoperhydropyrrolo[1,2-*a*]pyrazines
Arif Dastan, Yavuz Taskesenligil, Ferhan Tümer and Metin Balcı	14005	High temperature bromination—VIII. Bromination of homobenzonorbornadiene
Jordi Tormo, Xavier Verdaguer, Albert Moyano, Miquel A. Pericàs and Antoni Riera	14021	Chiral auxiliary-induced stereocontrol in intramolecular Pauson–Khand reactions leading to angular triquinanes
Antonio García Martínez, José Osío Barcina and Enrique Teso Vilar	14041	About the participation of σ, π and *n* orbitals in the solvolysis of 2- and 3-oxo-1-norbornyl triflates
K. Mallik Yadav, Pramod K. Mohanta, Hiriyakkanavar Ila and Hiriyakkanavar Junjappa	14049	Regioselective synthesis of substituted 1-methyl- and 2-methylnaphthalenes
Jacek W. Morzycki and Agnieszka Z. Wilczewska	14057	Reactions of 4-azacholest-5-en-3-one, 6-azacholest-4-en-7-one, and their N-methyl derivatives with electrophilic reagents
Alison T. Ung, Stephen G. Pyne, Brian W. Skelton and Allan H. White	14069	Asymmetric synthesis of (1*R*,2*S*,3*R*)-2-acetyl-5-(1,2,3,4-tetrahydroxybutyl)-thiazole
	I	Instructions to Contributors

NUMBER 45

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
	14079	Corrigenda
William E. Bauta, John Booth, Mary E. Bos, Mark DeLuca, Louis Diorazio, Timothy J. Donohoe, Christopher Frost, Nicholas Magnus, Philip Magnus, José Mendoza, Philip Pye, James G. Tarrant, Stephen Thom and Feroze Ujjainwalla	14081	Taxane diterpenes—I. Control of relative and absolute stereochemistry in intramolecular pyrylium ylide–alkene cyclizations for the synthesis of taxol precursors
Philip Magnus, John Booth, Louis Diorazio, Timothy Donohoe, Vince Lynch, Nicholas Magnus, José Mendoza, Philip Pye and James Tarrant	14103	Taxane diterpenes—II. Synthesis of the 7-deoxy ABC taxane skeleton, and reactions of the A-ring
Philip Magnus, Louis Diorazio, Timothy J. Donohoe, Melvyn Giles, Philip Pye, James Tarrant and Stephen Thom	14147	Taxane diterpenes—III. Formation of the eight-membered B-ring by semi-pinacol rearrangement
Yoshiji Takemoto, Satoru Kuraoka, Naoko Hamaue, Keiichi Aoe, Hajime Hiramatsu and Chuzo Iwata	14177	Enantioselective Cu-catalyzed 1,4-addition of Me_3Al to a 4,4-disubstituted cyclohexa-2,5-dienone
Katja Schultz and Manfred Hesse	14189	Total synthesis of the spermidine alkaloid (+)-(9*S*,13*S*)-isocyclocelabenzine
Rachel Waschbüsch, John Carran and Philippe Savignac	14199	A new route to α-fluorovinylphosphonates utilizing Peterson olefination methodology
Georges Dewynter, Mohamed Abdaoui, Zine Regainia and Jean-Louis Montero	14217	Synthesis of *N*-sulfamoyloxazolidinones and -perhydrooxazinones; reactivity and use as donors in the transsulfamoylation reaction; application to the preparation of 2-chloroethylnitrososulfamides—IV

Béatrice Hamann, Jean-Louis Namy and Henri B. Kagan	14225	Preparation and reactions of samarium diiodide in nitriles
Emmanuel Bertounesque, Thierry Imbert and Claude Monneret	14235	Synthesis of podophyllotoxin A-ring pyridazine analogue
Sergio Cossu and Ottorino De Lucchi	14247	A mild alternative to the use of benzyne in [4 + 2]-cycloaddition reactions
Maurizio D'Auria, Vittorio Esposito and Giacomo Mauriello	14253	Photochemical reactivity of aromatic and heteroaromatic nitroderivatives in the presence of arylalkenes
Kamaljit Singh, Jasbir Singh and Harjit Singh	14273	A synthetic entry into fused pyran derivatives through carbon transfer reactions of 1,3-oxazinanes and oxazolidines with carbon nucleophiles
Giovanni Fronza, Giovanni Fogliato, Claudio Fuganti, Piero Grasselli and Romina Rigoni	14281	Synthesis of (*S*) 2-ethyl-2-methylpentanoic acid from the formate ester of (*S*) ethyl 2-formyl-3-hydroxy-2-methylpropionate
Vishwakarma Singh and Prathap .S	14287	Photochemical reactions in organic synthesis: a novel and efficient route to angular and linear tetraquinanes
María A. de las Heras, Juan J. Vaquero, José L. García Navio and Julio Alvarez-Builla	14297	Synthesis of carbonyl and dicarbonyl compounds from organometallic reagents and *N*-imidazolium-*N*-methyl amides and bis-amides
Ugo Chiacchio, Antonio Rescifina, Francesco Casuscelli, Anna Piperno, Vincenzo Pisani and Roberto Romeo	14311	Intramolecular nitrone cycloaddition: stereoselective synthesis of piperidine systems
Ugo Chiacchio, Antonino Corsaro, Vito Librando, Antonio Rescifina, Roberto Romeo and Giovanni Romeo	14323	Intramolecular nitrile oxide cycloaddition (INOC) of substituted amidoximes
Clive W. Bird	14335	The application of group additivity parameters to the prediction of the enthalpies of formation of heteroaromatic compounds
Emma Alonso, Diego J. Ramón and Miguel Yus	14341	Arene-catalysed lithiation of triflates and triflamides under Barbier-type conditions: an indirect transformation of alcohols and amines into organolithium compounds
Robert S. Ward, Andrew Pelter, Revuru Venkateswarlu, Chakicherla Kamakshi and Ayalasomayajula Lakshmi	14349	Rearrangements of the 2,6-diaryl-3,7-dioxabicyclo[3.3.0] octane skeleton—III. Reaction of gmelinol with BF_3-etherate and *N*,*N*-dimethylaniline
	I	Instructions to Contributors

NUMBER 46

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
		TETRAHEDRON REPORT NUMBER 409
David M. Hodgson, Andrew R. Gibbs and Gary P. Lee	14361	Enantioselective desymmetrisation of achiral epoxides
		ARTICLES
David P. Sebesta, Sarah S. O'Rourke, Rogelio L. Martinez, Wolfgang A. Pieken and Danny P. C. McGee	14385	2'-Deoxy-2'-alkoxylaminouridines: novel 2'-substituted uridines prepared by intramolecular nucleophilic ring opening of 2,2'-*O*-anhydrouridines
Todd C. Henninger, Michal Sabat and Richard J. Sundberg	14403	Stereodivergent routes from tyrosine to the 7-(*R*) and 7-(*S*) diastereomers of the 7-hydroxy-2,3,7,7a-tetrahydroindole ring found in gliotoxin
Radhakrishnan P. Iyer, Dong Yu, Zhiwei Jiang and Sudhir Agrawal	14419	Synthesis, biophysical properties, and stability studies of mixed backbone oligonucleotides containing segments of methylphosphotriester internucleotidic linkages

David J. Hart, Gregory H. Merriman and David G. J. Young	14437	Synthesis of *C*-aryl glycosides related to the chrysomycins
Raymond A. Firestone	14459	Volume of concert and heavy atom effects in Diels–Alder reaction mechanisms
John A. Zoltewicz and Carlton D. Dill	14469	Inter-ring directed *ortho* lithiation by the 2-pyridyl group in bipyridines
Cynthia M. Shafer, Daniel I. Morse and Tadeusz F. Molinski	14475	Mechanism of SeO_2 promoted oxidative rearrangement of 2-substituted oxazolines to dihydrooxazinones: isotopic labeling and kinetic studies
Tatsuhiko Yoshida, Toshihiro Hashimoto, Shigeru Takaoka, Yukiko Kan, Motoo Tori, Yoshinori Asakawa, John M. Pezzuto, Thitima Pengsuparp and Geoffrey A. Cordell	14487	Phenolic constituents of the liverwort: four novel cyclic bisbibenzyl dimers from *Blasia pusilla* L.
Hisashi Matsuda, Tatsufumi Okino, Masahiro Murakami and Katsumi Yamaguchi	14501	Aeruginosins 102-A and B, new thrombin inhibitors from the cyanobacterium *Microcystis viridis* (NIES-102)
Hironao Sajiki and Karen Y. Ong	14507	Synthesis of C_2-symmetric (*S*,*S*)-1,4-dibenzyl-DTPA and 1,4-*meso*-dibenzyl-DTPA via chiral diamines
Masayoshi Tsubuki, Hironao Takada, Tadashi Katoh, Shigehiro Miki and Toshio Honda	14515	Synthesis and structural elucidation of a new zooecdysteroid gerardiasterone
Hiroshi Shinokubo, Koichiro Oshima and Kiitiro Utimoto	14533	Facile syntheses of α-bromo-α-silyl ketones and α-bromoacylsilanes from *tert*-butyldimethylsilyldibromomethane and carbonyl compounds
Toshihiko Onoda, Ryuichi Shirai, Yukiko Koiso and Shigeo Iwasaki	14543	Synthetic study on curacin A: a novel antimitotic agent from the cyanobacterium *Lyngbya majuscula*
Ryuji Yoneda, Yasuhiko Sakamoto, Yoshifumi Oketo, Shinya Harusawa and Takushi Kurihara	14563	An efficient synthesis of magallanesine using [1,2]-Meisenheimer rearrangement and Heck cyclization
Eckart Deseke, Wolfgang Hoyer and Ekkehard Winterfeldt	14577	Chemical differentiation of enantiotopic groups: diastereoselective opening of a prochiral dilactone
Achim Kless, Claudia Lefeber, Anke Spannenberg, Rhett Kempe, Wolfgang Baumann, Jens Holz and Armin Börner	14599	The first chiral early–late heterobimetallic complex—a titanium(IV)–palladium(II) complex based on salenophos
Rudolf Gompper, Peter Walther, Christoph Bräuchle and Stefan Stadler	14607	Chemistry and nonlinear optical properties of new 2*H*-benzotriazole derivatives
F. Barberis, R. Barone and M. Chanon	14625	HOLOWin: a fast way to search for tandem reactions with computer. Application to the taxane framework
Marion Lanier, Maurice Le Blanc and Raphaël Pastor	14631	Nucleophilic ring opening of 3-*F*-alkyl 2,3-epoxypropanoates. Access to α,β-difunctional β-*F*-alkylpropanoates
	I	Instructions to Contributors

NUMBER 47

Contents

	iii	Tetrahedron Prize for Creativity in Organic Chemistry
	v	Contributors to this Issue
	vii	Graphical Abstracts
Jürgen Weber and Udo H. Brinker	14641	Competing 1,*n*-elimination reactions of 1-bromo-5-bromomethyl-6,6-dichlorobicyclo[3.1.0]hexane: a strained 1,3-bridged cyclopropene and a vinylcarbene as reactive intermediates

Marcus A. Tius and David J. Drake	14651	Synthesis of (±)-xanthocidin
Colin G. Ferguson, Thomas Money, Joseph Pontillo, Peter D. M. Whitelaw and Michael K. C. Wong	14661	A remarkable multiple rearrangement process in the bromination of *endo*-3-bromo-4-methylcamphor: intermediates for triterpenoid synthesis
Derek H. R. Barton, Joseph Cs. Jaszberenyi, Wansheng Liu and Tetsuro Shinada	14673	Oxidation of hydrazones by hypervalent organoiodine reagents: regeneration of the carbonyl group and facile syntheses of α-acetoxy and α-alkoxy azo compounds
Maciej Adamczyk and Rajarathnam E. Reddy	14689	A new methodology for the preparation of 2-cyanopyrroles and synthesis of porphobilinogen
Vadim A. Soloshonok and Taizo Ono	14701	The effect of substituents on the feasibility of azomethine–azomethine isomerization: new synthetic opportunities for biomimetic transamination
Masatoshi Murakata, Kohei Yamada and Osamu Hoshino	14713	Oxidative cyclisation of *o*-phenolic oxime-acid derivatives using phenyliodonium diacetate: synthesis of spiroisoxazoline derivatives
Toshiaki Okuno, Ken Ohmori, Shigeru Nishiyama, Shosuke Yamamura, Kensuke Nakamura, K. N. Houk and Kazuya Okamoto	14723	Chemical study on hapalosin, a cyclic depsipeptide possessing multidrug resistance reversing activities: synthesis, structure and biological activity
Gregor Radau, Ralf Büllesbach und Peter Pachaly	14735	Zur Synthese von Tiliacora-Alkaloiden—III. Synthese von Biarylen durch Ullmann–Kupplung
Claus Herdeis and Thomas Schiffer	14745	Synthesis of chiral nonracemic homo-1-deoxyazasugars with D-talo- and L-allo-configuration via tandem Wittig [2 + 3] cycloaddition reaction
Alexander S. Golubev, Norbert Sewald and Klaus Burger	14757	Synthesis of γ-oxo α-amino acids from L-aspartic acid
Gerald Dyker, Jutta Körning, Peter Bubenitschek and Peter G. Jones	14777	[4 + 2] Cycloaddition reactions of acenaphth[1,2-*a*]acenaphthylene
Andreas J. Kesel, Stephan Urban and Walter Oberthür	14787	Interconvertible (*Z*/*E*)-stereoisomers of a vitamin B_6 coenzyme analog derived from pyridoxal 5'-phosphate and rhodanine
Stephanie Klötgen, Roland Fröhlich and Ernst-Ulrich Würthwein	14801	1,7-Electrocyclisation reactions of 2-azaheptatrienyl lithium compounds: synthesis of 1-acyl-2,3-dihydroazepines
Karl Griesbaum, Michael Hilß and Joachim Bosch	14813	Ozonides of mono-, bi- and tricyclic terpenes
Angelika Kranz, Emmanuelle Samson-Schulz, Lothar Hennig, Peter Welzel, Dietrich Müller, Heike Mayer-Figge and William S. Sheldrick	14827	Synthesis of new strigol analogues
Shigui Li, Yves L. Dory and Pierre Deslongchamps	14841	Hydrolysis of cyclic orthoesters: experimental observations and theoretical rationalization
Daniel Colombani and Bernard Maillard	14855	Stereoselectivity of the intramolecular homolytic substitution in the induced decomposition of methacrylic-type peroxidic compounds
M. Baltas, K. Raouf-Benchekroun, A. De Blic, L. Cazaux, P. Tisnès, L. Gorrichon, K. Hussein and J.-C. Barthelat	14865	Aminolysis of sulfinamoyl-esters, -sulfonamides and -sulfones. Thiooxamate and thiourea formation via a sulfine intermediate. Thiophilic or carbophilic reaction?
Jean-Philippe Surivet, Jaques Goré and Jean-Michel Vatèle	14877	Enantioselective synthesis of (+)-goniodiol and of its naturally occurring acetylated analogs
Florence Keyling-Bilger, Gaby Schmitt, Alain Beck and Bang Luu	14891	Synthesis of optically active diastereomers of a nonproteic neurotrophic mimetic
Jerzy Suwinski, Wojciech Szczepankiewicz and Elizabeth M. Holt	14905	Reactions of 1,4-dinitroimidazoles with hydrazines

Sk. Asrof Ali, S. M. Azhar Hashmi, Mohammad N. Siddiqui and Mohammed I. M. Wazeer	14917	Regiochemistry of mercury(II) oxide oxidation of unsymmetrical *N,N*-disubstituted hydroxylamines
Habib Firouzabadi and Farhad Shiriny	14929	New applications of tungsten hexachloride (WCl_6) in organic synthesis. Halo-de-hydroxylation and dihalo-de-oxo-bisubstitution reactions
Andrew D. Briggs, Michel Camplo, Sally Freeman, Jan Lundström and Brian G. Pring	14937	Acyloxymethyl and 4-acyloxybenzyl diester prodrugs of phosphonoformate
David C. Harrowven and Rory Browne	14951	A triple umpolung sequence for the preparation of highly substituted indanes
Yuewei Guo, Anna Madaio, Enrico Trivellone, Gennaro Scognamiglio and Guido Cimino	14961	Further studies of alkaloids from *Reniera sarai*: structures of saraine-3 and isosaraine-3; absolute stereochemistry of saraine-1 and saraine-2
David Wensbo and Salo Gronowitz	14975	Indole-3-pyruvic acid oxime ethers and thieno analogues by Heck cyclisation. Application to the synthesis of thia-tryptophans
Pierre Tane, Apollinaire Tsopmo, David Ngnokam, J. Foyere Ayafor and Olov Sterner	14989	New friedelane triterpenes from *Lepidobotrys staudtii*
Margita Lácová, Jarmila Chovancová, Eva Veverková and Štefan Toma	14995	Microwaves assisted Gabriel synthesis of phthalides
Demetrios N. Nicolaides, Raed Wajih Awad, Konstantinos E. Litinas and Elizabeth Malamidou-Xenikaki	15007	Reactions of 7-methoxyimino-4-methylchromene-2,8-dione with phosphines. Preparation of N-substituted 7-amino-8-hydroxy-4-methyl-2*H*-[1]-benzopyran-2-ones
Bargur P. Gangamani, Vaijayanti A. Kumar and Krishna N. Ganesh	15017	Synthesis of N^{α}-(purinyl/pyrimidinyl acetyl)-4-aminoproline diastereomers with potential use in PNA synthesis
	I	Instructions to Contributors

NUMBER 48

Contents

	iii	Contributors to this Issue
	v	Graphical Abstracts
		TETRAHEDRON REPORT NUMBER 410
Alan R. Katritzky, Stanislaw Rachwal and Bogumila Rachwal	15031	Recent progress in the synthesis of 1,2,3,4-tetrahydroquinolines
		ARTICLES
Alois Fürstner and Ingo Konetzki	15071	Synthesis of 2-hydroxy-6-{[(16*R*)-β-D-mannopyranosyloxy]heptadecyl}-benzoic acid, a fungal metabolite with $GABA_A$ ion channel receptor inhibiting properties
Rüdiger Selke, Manuela Ohff and Andreas Riepe	15079	Asymmetric hydrogenation—influence of the structure of carbohydrate derived catalysts on the relative enantioselectivity $Q_{H/Me}$ regarding acid and ester substrates and its inversion—selectivity increase in water by amphiphiles
Laurence Mévellec, Michel Evers and François Huet	15103	High selectivities in electrophilic additions to cyclobutene compounds
Nicole Langlois, Nathalie Dahuron and Hai-Shan Wang	15117	Enantioselective syntheses of (*R*)-3-phenyl GABA, (*R*)-baclofen and 4-arylpyrrolidin-2-ones
Florence Billon-Souquet, Thierry Martens and Jacques Royer	15127	Anodic oxidation of the *N*-cyanomethyloxazolidine system

Josette Soulié, Thomas Faitg, Jean-François Betzer and Jean-Yves Lallemand	15137	General access to polyhydroxylated nortropane derivatives through hetero Diels–Alder cycloaddition—II. Synthesis of (±) calystegine B_2
Philippe Gros, Philippe Hansen and Paul Caubère	15147	Aggregative activation and carbanion chemistry: complex base deprotonation and directed functionalisation of dithioacetals
Yves L. Janin, Anne-Marie Aubertin, Angèle Chiaroni, Claude Riche, Claude Monneret, Emile Bisagni and David S. Grierson	15157	Imidazo[1,5-*g*][1,4]diazepines, TIBO analogues lacking the phenyl ring: synthesis and evaluation as anti-HIV agents
Ermitas Alcalde, Montserrat Alemany and Maria Gisbert	15171	A direct synthetic approach to novel quadrupolar [1_4]azolophanes
Ermitas Alcalde, Maria Gisbert, Carmen Alvarez-Rúa and Santiago García-Granda	15189	Quadrupolar [1_4](*meta*–*ortho*)$_2$azolophanes. Intramolecular C–H···N and to water C–H···O hydrogen bonding revealed by X-ray diffraction
Ermitas Alcalde, Maria Gisbert, Josep M. Pons and Lluïsa Pérez-García	15197	Unconventional acceptor and donor functional groups linked by a captodative spacer
Neeraj Garg, Adolf Gogoll, Christer Westerlund, Staffan Sundell, Anders Karlén and Anders Hallberg	15209	Preparation of *cis*-5-methoxy- and -7-methoxy-1-acetoxy-1,2,3,4,4a,10a-hexahydro-9(10*H*)-phenanthrenone. An epoxide–arene reaction involving a selective 1,2-alkyl shift rearrangement
Mauri Lounasmaa and Pirjo Hanhinen	15225	Studies on the biomimetic preparation of the sarpagan ring system. Attempts to apply the spontaneous 'biogenetic-type cyclization' of van Tamelen to bond formation between C-5 and C-16 in the corynantheine series
Francisco Caturla and Carmen Nájera	15243	Studies on the reactivity of methyl γ-tosylcrotonoate as ambident reagent in organic synthesis
John M. Herbert, Julian G. Knight and Brian Sexton	15257	Cleavage of MEM ethers by tetrahalozincate reagents
Donald Craig, Christopher J. Etheridge and Alison M. Smith	15267	(Alkoxyallyl)sulfones as enal β-anion equivalents. Synthesis of 5-substituted 2(5*H*)-furanones
Donald Craig and Christopher J. Etheridge	15289	(Alkoxyallyl)sulfones as enal and enone β-anion equivalents. Synthesis of mono-, di- and trisubstituted furans
Adel A.-H. Abdel-Rahman, Omar M. Ali and Erik B. Pedersen	15311	Insertion of 5-methyl-N^4-(1-pyrenylmethyl)cytidine into DNA. Duplex, three-way junction and triplex stabilities
Anthony G. M. Barrett, Wendel W. Doubleday and Gary J. Tustin	15325	Asymmetric synthesis of bicyclopropane derivatives
	I	Instructions to Contributors

TETRAHEDRON: Instructions to Contributors

For full instructions see issue 1 of this volume.

Tetrahedron seeks to publish experimental or theoretical research results of outstanding significance and timeliness in the field of Organic Chemistry, Bio-organic Chemistry and related disciplines. Publications may be in the form of Articles, Reports, or Symposia-in-Print. In order to achieve rapid publication, all contributions to this journal are reproduced directly from the author's typescript.

ARTICLES

Articles for *Tetrahedron* should describe original research in organic chemistry of high quality and timeliness. Because of restrictions on the size of the journal, priority will be given to those contributions describing scientific work having as broad appeal as possible to the diverse readership. We ask referees to help in the selection of articles which have this breadth and suggest that papers covering narrower aspects of the field be sent to journals specializing in those areas. It is strongly recommended that articles be written in English.

REPORTS

These are specially commissioned critical reports reviewing research results of topical importance. Such articles, published only in English, are commissioned in appropriate fields by the Editors of Tetrahedron Reports.

SYMPOSIA-IN-PRINT

These comprise collections of original research papers (including experimental sections) covering timely areas of organic chemistry. Topics for forthcoming Symposia are announced in the journal from time to time. A Guest Editor will invite authors active in the field to submit papers which are then reviewed and processed for publication by the Guest Editor under the usual refereeing system. Opportunity is also provided for other active investigators to submit contributions. These Symposia are published in English.

MANUSCRIPT PREPARATION

Manuscripts should be typed in 1.25 or 1.5 line spacing in black ink on good quality white bond paper. Either US Letter size paper (21.6 × 27.9 cm, 8.5 × 11 in) or A4 size paper (21.0 × 29.7 cm, 8.3 × 11.6 in) is acceptable. *For papers composed on a word processor, letter quality printers, but not dot matrix printers, should be used.* Xerox or other machine copy typescript may be used if the reproduction is rendered in crisp, clear black and white tones. The title should be in bold, centred on the width of the page at least 2 cm from the top of the page, with the initial letter of each major word capitalized. After 2 cm of space, the authors' names and addresses should be provided on separate lines. The author or authors to whom correspondence should be addressed by readers of the journal should be indicated by an asterisk. Should the corresponding author wish to cite an Email address then this should be placed as a footnote on the first page of the manuscript. Authors must include a short abstract in English of approximately four to six lines typed in single spacing. This should appear immediately after the address and before the commencement of the article. The typing area of page 1, including the title, should be 18.75 cm wide by 24 cm deep. The typing area of all other pages should be extended to cover an area 18.75 cm wide by approximately 26 cm deep. Articles should be an even number of pages which should be numbered in blue pencil on a front corner of each page.

REFERENCES

References to the literature should follow the format outlined in the Journal of the American Chemical Society.

1. Doe, J. S.; Smith, J.; Roe, P. *J. Am. Chem. Soc.* **1968,** *90,* 8234.

Note: The contents of papers shall be the sole responsibility of the authors and publication shall not imply the concurrence of Editors or Publisher.

GRAPHICAL ABSTRACTS

Authors are requested to supply a graphical abstract in triplicate in finished, camera-ready form at the time the article is first submitted. These abstracts should aim at presenting the essence of the article in a concise, pictorial form. Carefully drawn structural formulae are desired which serve to illustrate the theme of the paper. Appropriate text should be incorporated, not to exceed the space limitations (5 × 19.5 cm). In publication, abstracts will be reduced by 25%.

CAMERA-READY REQUIREMENTS, FORMULAE AND TABLES

To maintain a finished, artistic appearance of the journal, authors are asked to use whatever resources are available to them to produce manuscripts of pleasing appearance. Direct reproduction of camera-ready papers requires the author to provide the manuscript in a finished artistic format, making the best possible use of the space within an even number of completely utilized pages. If possible a system should be used that allows text and graphics to be integrated in the printout. Any materials that cannot be directly printed should be neatly glued in the appropriate place in the text just above the corresponding caption. Freehand illustrations will not be accepted. The size of formulae may vary according to the nature of the illustrations but these should neither be overpowering nor so small that they are hard to read after reduction by a factor of 25%. *Regional Editors may return otherwise acceptable papers for modification if the quality of the figures or structural formulae is poor or the overall layout is carelessly composed.*

If authors have problems in the preparation of their manuscripts such as allocation of space, reproduction of formulae, charts or tables, they may contact members of the Board of Editors for advice.

HAZARDOUS COMPOUNDS

Authors are encouraged to draw attention to hazards by adding the word CAUTION followed by a brief descriptive phrase and literature reference if appropriate.

TRADEMARKS

Authors are required to acknowledge trademark protection in the standard fashion, e.g. Selectride®, Exaltrolide® (although not for words which have entered general usage, e.g. pyrex, etc.).

ORGANIC CHEMISTRY NOMENCLATURE

Authors will find the following a useful reference book for recommended nomenclature: *IUPAC Nomenclature of Organic Chemistry* ('The Blue Book'), edited by J. Rigaudy and S. P. Klesney, Pergamon Press, Oxford, 1979.

REFEREEING PROCESS

All papers are submitted to referees who advise the Editors on the matter of acceptance in accordance with the high standards required, on the understanding that the subject matter has not been previously published. Authors must accept full responsibility for the factual accuracy of the data presented and should obtain any necessary authority to publish. Referees' names are not disclosed but their views are forwarded by the Editors to the authors for consideration. Papers are accepted subject to editorial amendment as necessary. Authors are encouraged to suggest names of several experts in the field when papers are first submitted or at any time in the evaluation process.

REPRINTS

Any reprints required (above the 100 free) for directly reproduced manuscripts must be indicated on submission.

LANGUAGE OF PUBLICATION

The Board of Editors strongly recommends that Tetrahedron Papers be in English, but papers in French and German will be considered. Tetrahedron Reports and Symposia papers must be in English.

X-RAY CRYSTALLOGRAPHIC DATA

Manuscripts reporting X-ray Crystallographic data must be accompanied by lists of refined coordinates and bond distances with esd's for deposition at the Cambridge Crystallographic Data Centre [see Notice to Authors, *Tetrahedron* **1984**, *40(2)*, ii].

CHARACTERIZATION OF NEW COMPOUNDS

All new compounds should be fully characterized

with relevant spectroscopic data. Microanalytical data should be included whenever possible.

MAILING OF MANUSCRIPTS

Manuscripts and Graphical Abstracts should be sent in triplicate directly to the Regional Editor for the particular area as given below. Papers sent to other Regional Editors will be forwarded for refereeing to the appropriate Editor as determined by the address of the author to whom the correspondence should be sent (who should be indicated by an asterisk).

All authors must sign the 'Transfer of Copyright' agreement before the article can be published. This transfer agreement enables Elsevier Science Ltd to protect the copyrighted material for the authors, but does not relinquish the author's proprietary rights. The copyright transfer covers the exclusive rights to reproduce and distribute the article, including reprints, photographic reproductions, microform or any other reproductions of similar nature and translations, and includes the right to adapt the article for use in conjunction with computer systems and programs, including reproduction or publication in machine-readable form and incorporation in retrieval systems. Authors are responsible for obtaining from the copyright holder permission to reproduce any figures for which copyright exists.

(1) **Austria, Germany and Switzerland and all papers in the German language,** Professor W. Steglich, Institut für Organische Chemie der Universität München, Karlstr. 23, D-80333 München, Germany
Fax: 49 89 5469225

(2) **Papers from the French-speaking area, in French or in English, and all papers in the French language,** Professor L. Ghosez, Laboratoire de Chimie Organique de Synthèse, Université Catholique de Louvain, Place L. Pasteur 1, B-1348 Louvain-la-Neuve, Belgium
Fax: 32 10 47 29 44

(3) **China,** Professor Lin Guo-Qiang, Shanghai Institute of Organic Chemistry, Academia Sinica, 345 Lingling Lu, 200032 Shanghai, China (manuscripts from Taiwan may be sent to Professor Lin, or to the usual Editor in Japan, at the choice of the authors)
Fax: 86 21 64166263

(4) **Papers from the Russian-speaking area,** Professor N. K. Kochetkov, N. D. Zelinsky Institute of Organic Chemistry, Academy of Sciences, Leninsky Prospekt 47, Moscow B-334, Russia
Fax: 7 095 13 55 328

(5) **Japan, North and South Korea, Hong Kong and Macao,** Professor T. Shioiri, Faculty of Pharmaceutical Sciences, Nagoya City University, Tanabe-dori, Mizuho-ku, Nagoya 467, Japan
Fax: 81 52 834 4172

(6) **The Americas:** *Physical Organic Chemistry, Computer Oriented Chemistry and Heterocyclic Chemistry,* Professor A. R. Katritzky, FRS, Department of Chemistry, University of Florida, Gainesville, FL 32611, USA
Fax: 1 352 392 9199

(7) **The Americas:** *Natural Products: Structure and Synthesis, Synthetic Methods, and Synthesis other than Heterocyclic Compounds,* Professor S. F. Martin, Department of Chemistry and Biochemistry, University of Texas, Austin, TX 78712-1167, USA
Fax: 800 435 6857

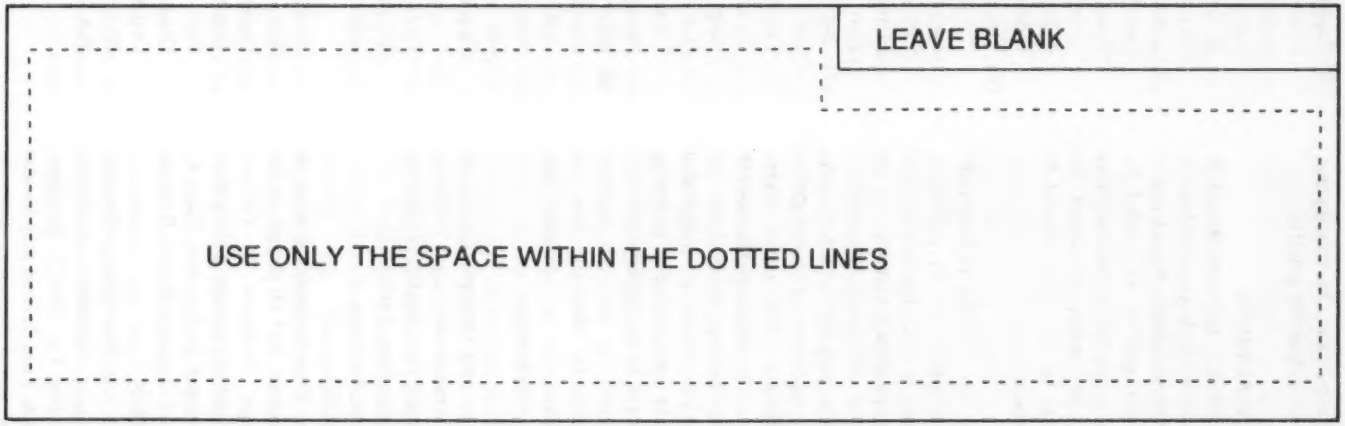
(8) **All regions other than those specified under (1)–(7) above,** Professor A. McKillop, University of East Anglia, School of Chemical Sciences, University Plain, Norwich NR4 7TJ, UK
Fax: 44 1603 507773

Tetrahedron Symposia-in-Print
To the Guest Editor as announced for the particular symposium.

Tetrahedron Reports
The Americas, Professor G. H. Posner, Department of Chemistry, Johns Hopkins University, Baltimore, MD 21218-2685, USA
Fax: 1 410 516 8420
Other locations, Professor W. B. Motherwell, Department of Chemistry, University College, 20 Gordon Street, London, WC1H 0AJ, UK
Fax: 44 171 380 7463

TET **TETRAHEDRON** **75%**

GRAPHICAL ABSTRACT EXAMPLE



ELSEVIER SCIENCE

ELSEVIER SCIENCE LTD
TRANSFER OF COPYRIGHT AGREEMENT

Scientific publishers and authors share a common interest in the protection of copyright: authors principally because they want their creative works to be protected from plagiarism and other unlawful uses, publishers because they need to protect their work and investment in the production, marketing and distribution of the article written by the author. In order to do so effectively, publishers need a formal written transfer of copyright from the authors(s) for each article published. We therefore ask you to complete and return this form promptly, retaining a copy for your records. Your cooperation is essential and appreciated.

Article entitled: _____

_____

Author(s): _____

_____

To be published in the journal: TETRAHEDRON

_____

Effective upon acceptance for publication, copyright (including all rights thereunder and the right to obtain copyright registration in the name of the publisher, whether separately or as a part of a journal issue or otherwise) in the above article is hereby transferred throughout the world and for the full term and all extensions and renewals thereof, to:

ELSEVIER SCIENCE LTD

This transfer includes the right to adapt the article for use in conjunction with computer systems and programs, including reproduction or publication in machine-readable form and incorporation in retrieval systems.

Rights of authors

Elsevier Science LTD recognizes the retention of the following rights by the author(s):

1. Patent and trademark rights and rights to any process or procedure described in the article.

2. The right to photocopy or make single electronic copies of the article for their own personal use, including for their own classroom use, or for the personal use of colleagues, provided the copies are not offered for sale and are not distributed in a systematic way outside of their employing institution (e.g. via an e-mail list or public file server). Posting of the article on a secure network (not accessible to the public) within the author's institution is permitted.

3. The right, subsequent to publication, to use the article or any part thereof free of charge in a printed compilation of works of their own, such as collected writings or lecture notes.

Note: All copies, paper or electronic, or other use of the information must include an indication of the Elsevier Science LTD copyright and a full citation of the journal source. *Please refer requests for all uses not included above, including the authorization of third parties to reproduce or otherwise use all or part of the article (including figures and tables), to Elsevier Science LTD, Rights & Permissions Dept. The Boulevard, Langford Lane, Kidlington, Oxford, OX5 1GB, England.*

ELSEVIER SCIENCE

MSS.....

Authorship

If the article was prepared jointly with other author(s), the signing author has informed the co-author(s) of the terms of this copyright transfer and is signing on their behalf as their agent and represents that he or she is authorized to do so. Please confirm by marking the appropriate box following the signature line. The signing author shall bear the responsibility for designating the co-author(s) and must inform Elsevier Science of any changes in authorship.

If copyright is held by the employer, the employer or an authorized representative of the employer must sign. If the author signs, it is understood that this is with the authorization of the employer and the employer's acceptance of the terms of the transfer. Please confirm by marking the appropriate box following the signature line.

If the author is a U.S. or Canadian Government employee and this work was done in that capacity, the copyright transfer applies only to the extent allowed by U.S. or Canadian law and the author should sign this form. If at least one author is not a Government employee, that author should sign the copyright transfer form. Please confirm by marking the appropriate box following the signature line.

Warranties

The author(s) warrant(s) that the article is the author's original work and has not been published before. The author(s) warrant(s) that the article contains no libellous or other unlawful statements, and does not infringe on the rights of others. If excerpts from copyrighted works are included, the author(s) has (have) obtained or will obtain written permission from the copyright owners and will credit the sources in the article.

Preprints

The author(s) must agree that if a prior version of this work (normally a preprint) has been posted to an electronic public server, they will not update and/or replace this prior version in order to make it identical in contents to the final published version.

Signature of copyright owner(s) : _____ _____

Name (printed) : _____ _____
Title (if employer representative): _____
Company or institution : _____ _____
Date : _____

ATTACH ADDITIONAL SIGNATURE PAGE AS NECESSARY

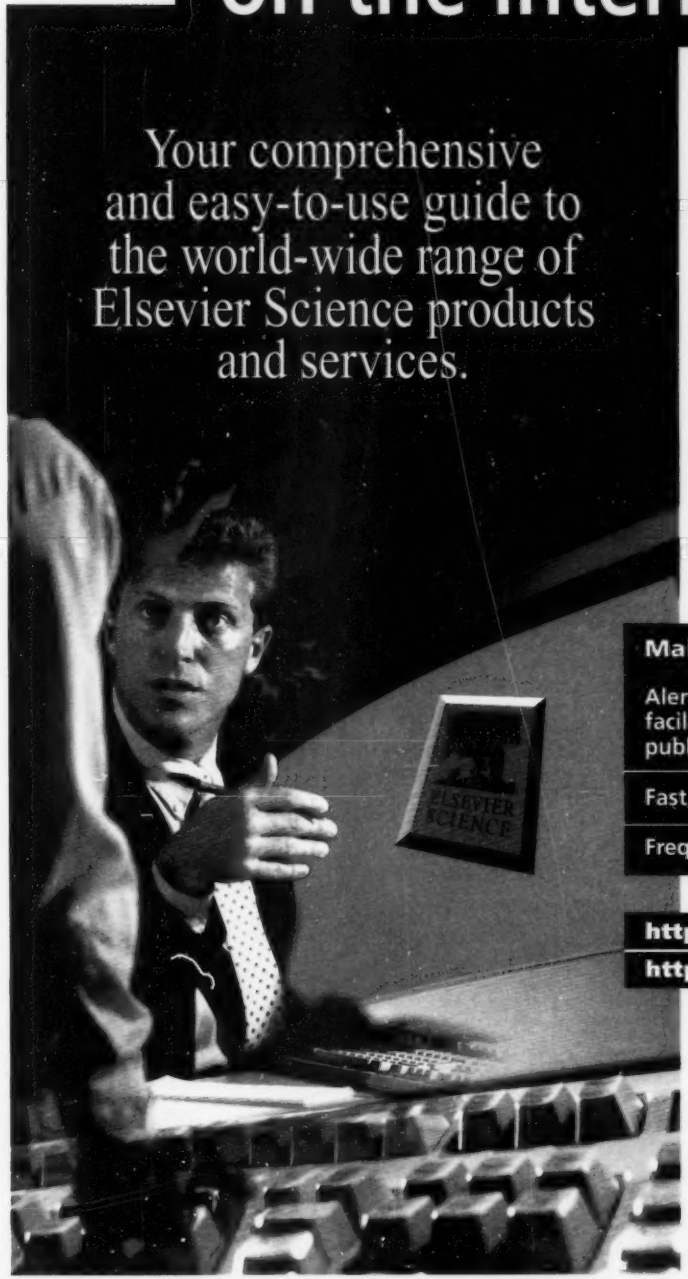
If any of the following apply, please mark the box(es):

- ☐ author on behalf of all co-authors
- ☐ employer representative
- ☐ employee of the U.S. government
- ☐ employee of the Canadian government

Please retain a copy of this form for your files and return the original to:

Elsevier Science Ltd
Attn: Tetrahedron Publications
The Boulevard
Langford Lane
Kidlington
Oxford, OX5 1GB
UK

Elsevier Science on the Internet



Your comprehensive and easy-to-use guide to the world-wide range of Elsevier Science products and services.

Visit Elsevier Science on the Internet and access a unique repository of information covering the entire scientific spectrum. Our time-saving search facilities will lead you to our frequent updates in seconds.

Main features include:

Alerting and awareness facilities for new and forthcoming publications.

Fast, time-saving search facilities.

Frequent updates.

http://www.elsevier.com

http://www.elsevier.nl

ELSEVIER | PERGAMON | NORTH HOLLAND | EXCERPTA MEDICA

• BACK ISSUES OF •
THIS
JOURNAL

Back issues of this and all other Elsevier Science journals are available in hard copy. New subscribers to a journal may purchase back issues of that publication in hard copy edition at 25% discount off the standard price. Elsevier Science maintains stocks of back issues and orders may be placed with confidence at your nearest Elsevier Science office. Should any issue of a volume be temporarily out of stock at the time of ordering, a high quality photoduplicated copy will be supplied at no extra charge to complete your order.

SAVE UP TO 25% BY PURCHASING COMPLETE SETS
Customers wishing to purchase complete sets can do so at a saving of 25% off the individual volume price.

MICROFORM EDITIONS
Back issues in microform of Elsevier Science research journals are also available. For further information please apply to your nearest Elsevier Science office.

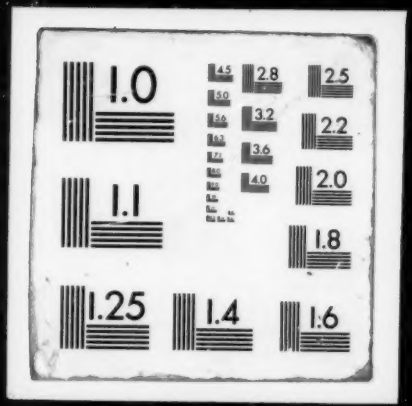
BACK ISSUES PRICE LIST
Full details of the rates of back issues of all Elsevier Science journals can be found in our Back Issues Price List. Please contact your nearest Elsevier Science office for a copy.

Elsevier Science, Regional Sales Office, Customer Support Department, PO Box 211,
1000 AE Amsterdam, The Netherlands
• Telephone: +31 20-4853757 • Fax: +31 20-4853432 • E-mail: nlinfo-f@elsevier.nl

Elsevier Science, Regional Sales Office, Customer Support Department,
655 Ave of the Americas, New York, NY 10010, USA
• Telephone: +1-212-633-3730 • Fax: +1-212-633-3680 • E-mail: usinfo-f@elsevier.com

CO7A05/p2

Printed in Great Britain by Bell and Bain Ltd, Glasgow


1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
5.0
5.6
6.3
7.1
8.0
9.0
10.0